BOEING

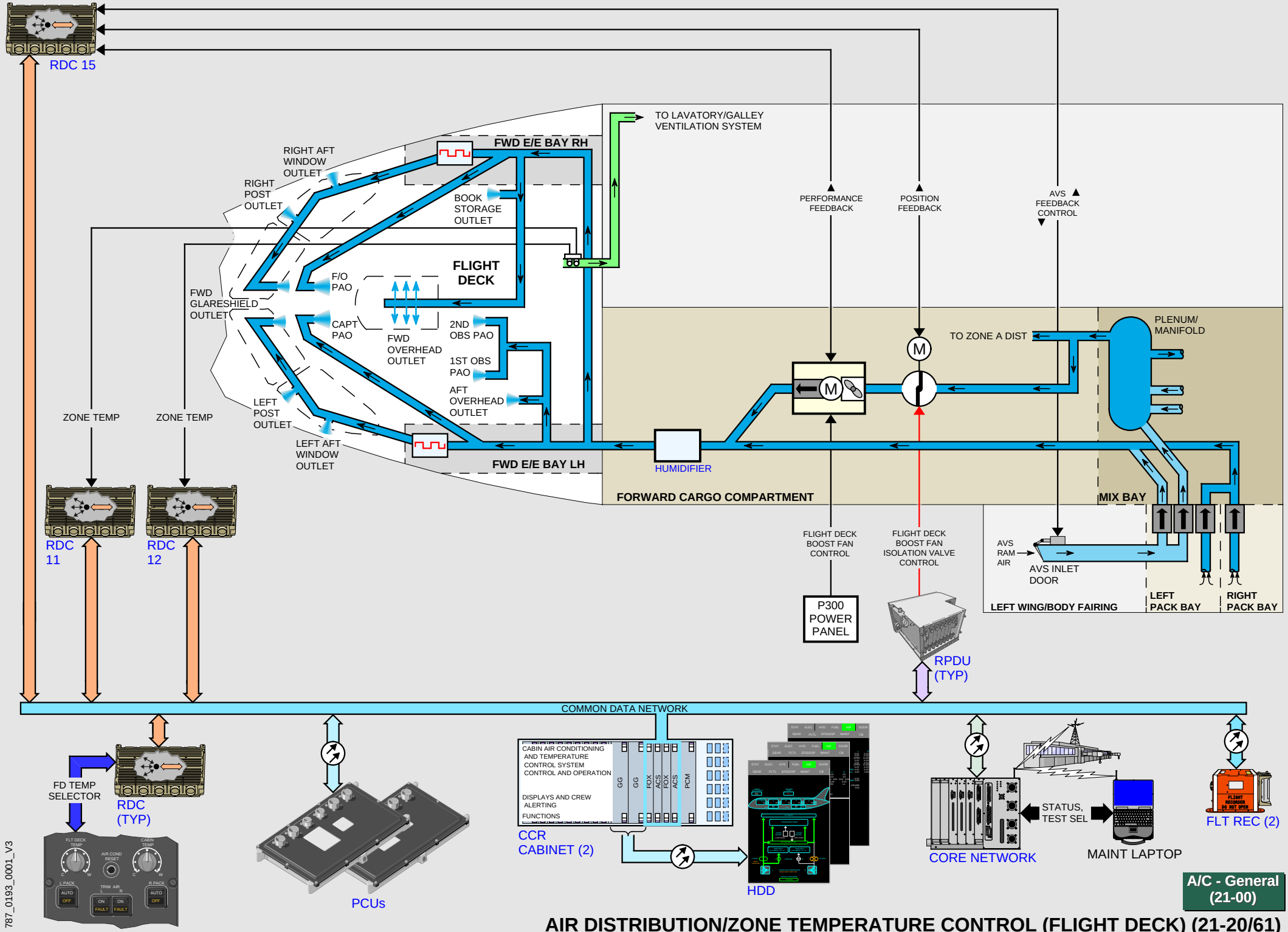
Flight Services

MAINTENANCE TRAINING

SYNOPTIC MANUAL

ROLLS-ROYCE

787



787_0193_0001_V3

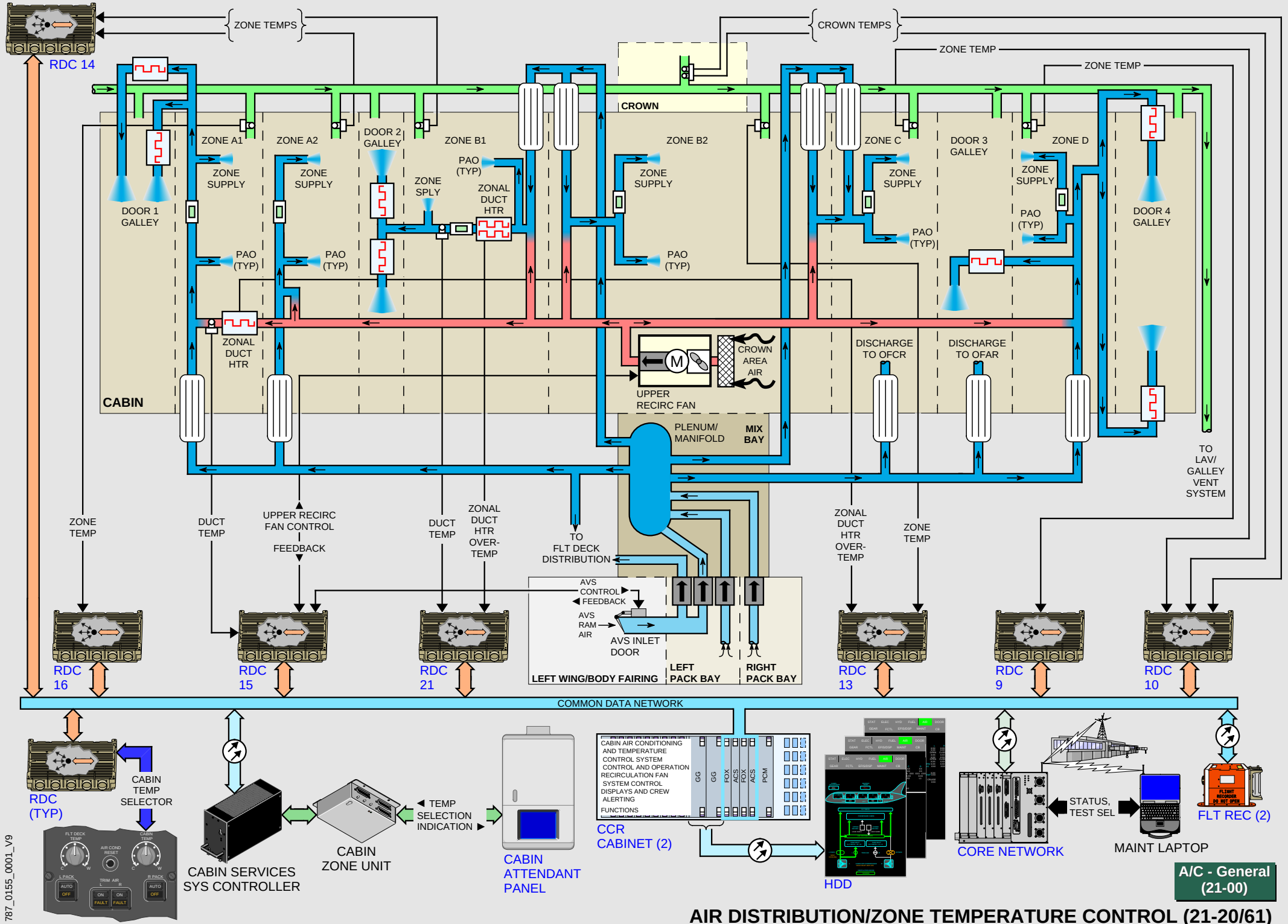
Applicable To: DM Applicability (See Title Page)

AIR DISTRIBUTION/ZONE TEMPERATURE CONTROL (FLIGHT DECK) (21-20/61)

A/C - General (21-00)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



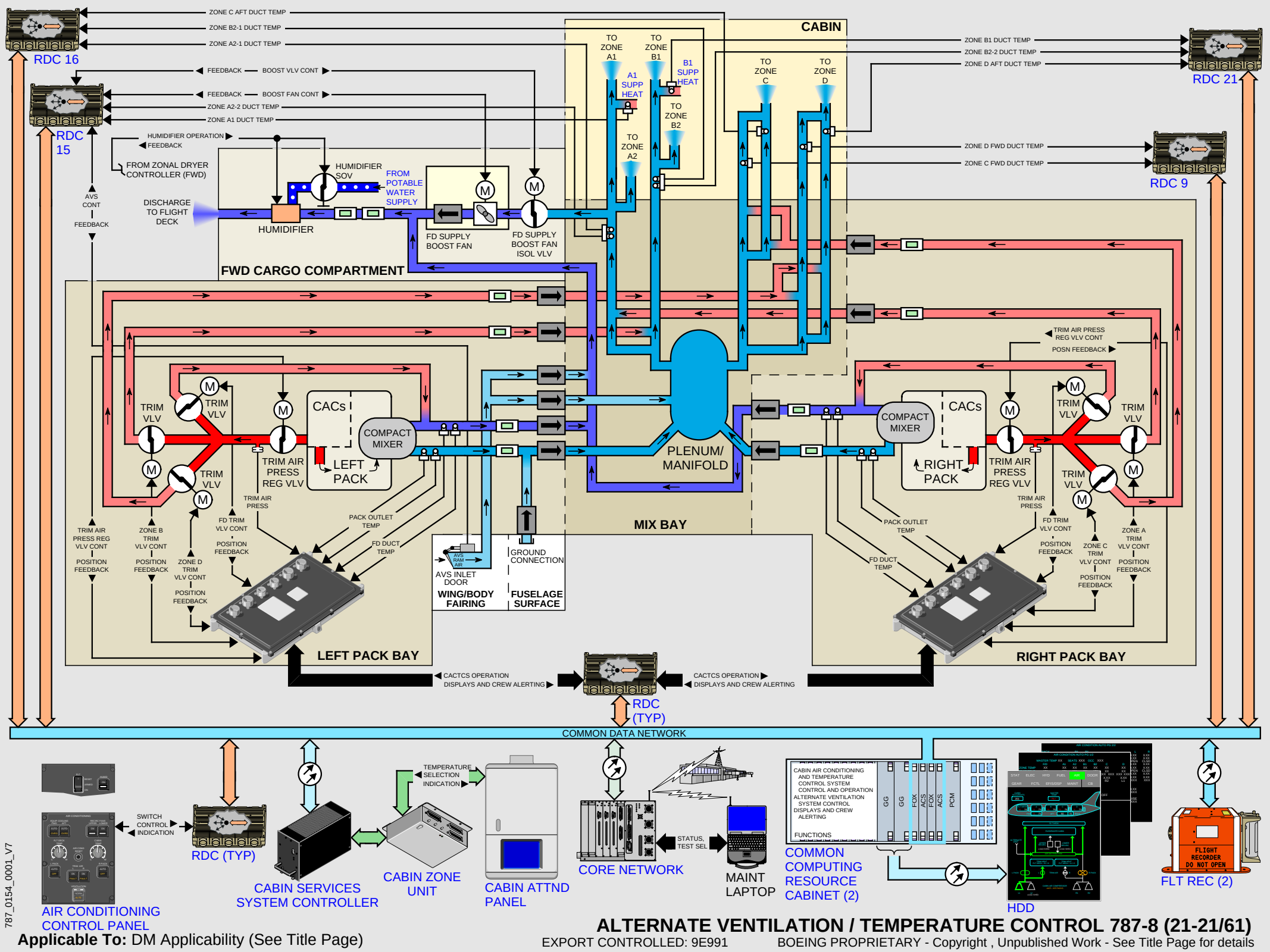
Applicable To: DM Applicability (See Title Page)

AIR DISTRIBUTION/ZONE TEMPERATURE CONTROL (21-20/61)

A/C - General (21-00)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



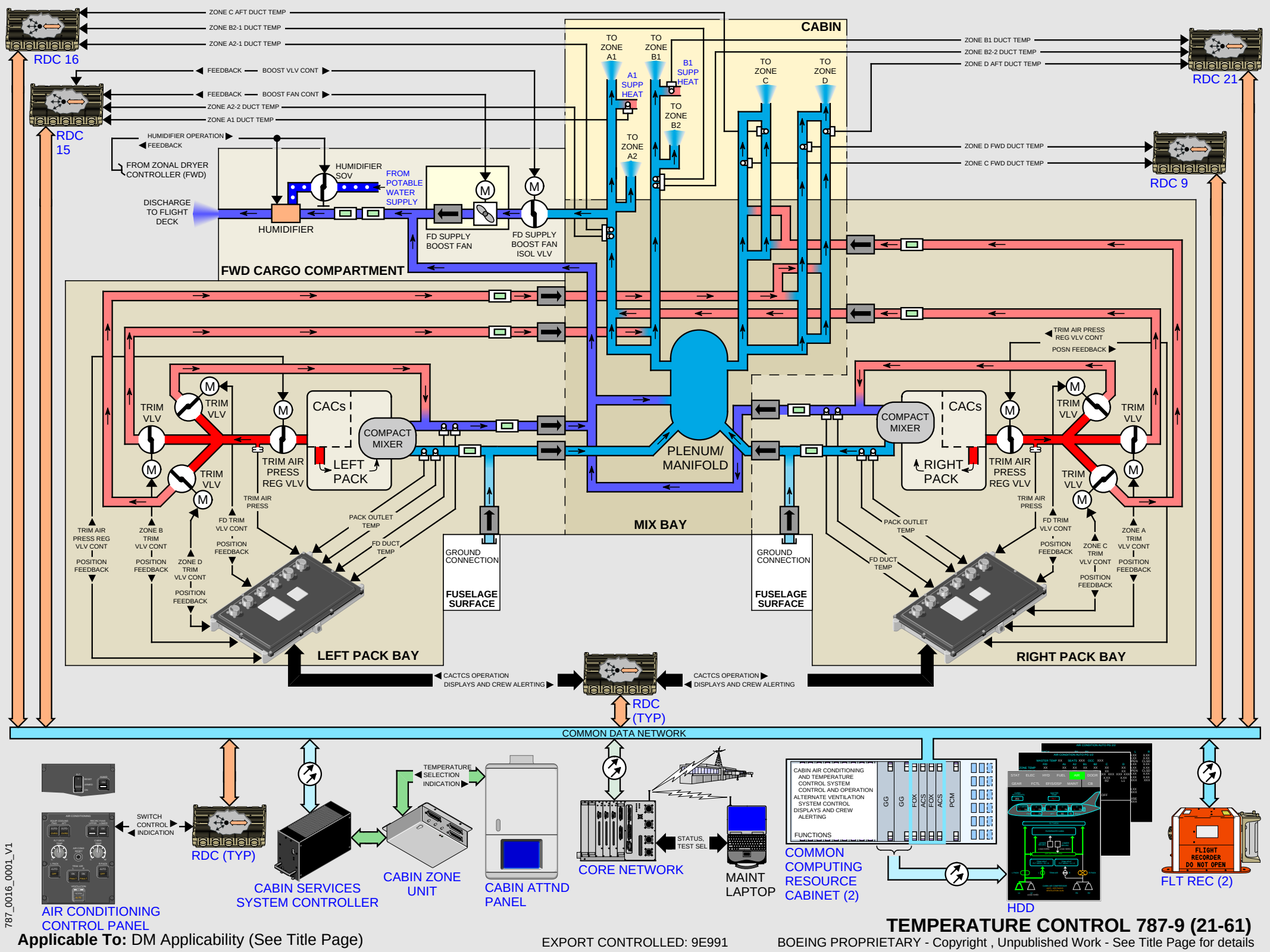
ALTERNATE VENTILATION / TEMPERATURE CONTROL 787-8 (21-21/61)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

787_0154_0001_V7



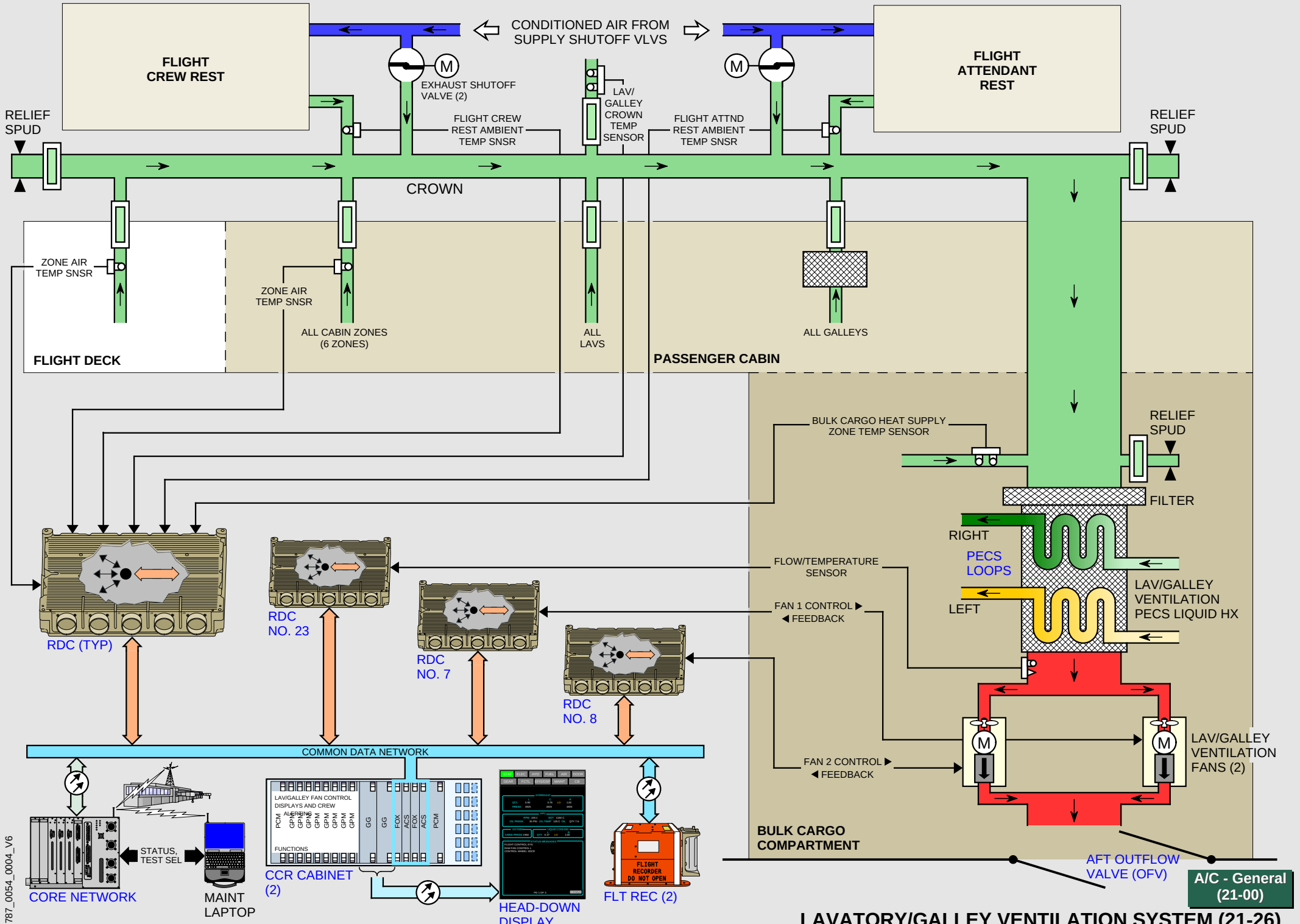
787_0016_0001_V1

TEMPERATURE CONTROL 787-9 (21-61)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0054_0004_V6

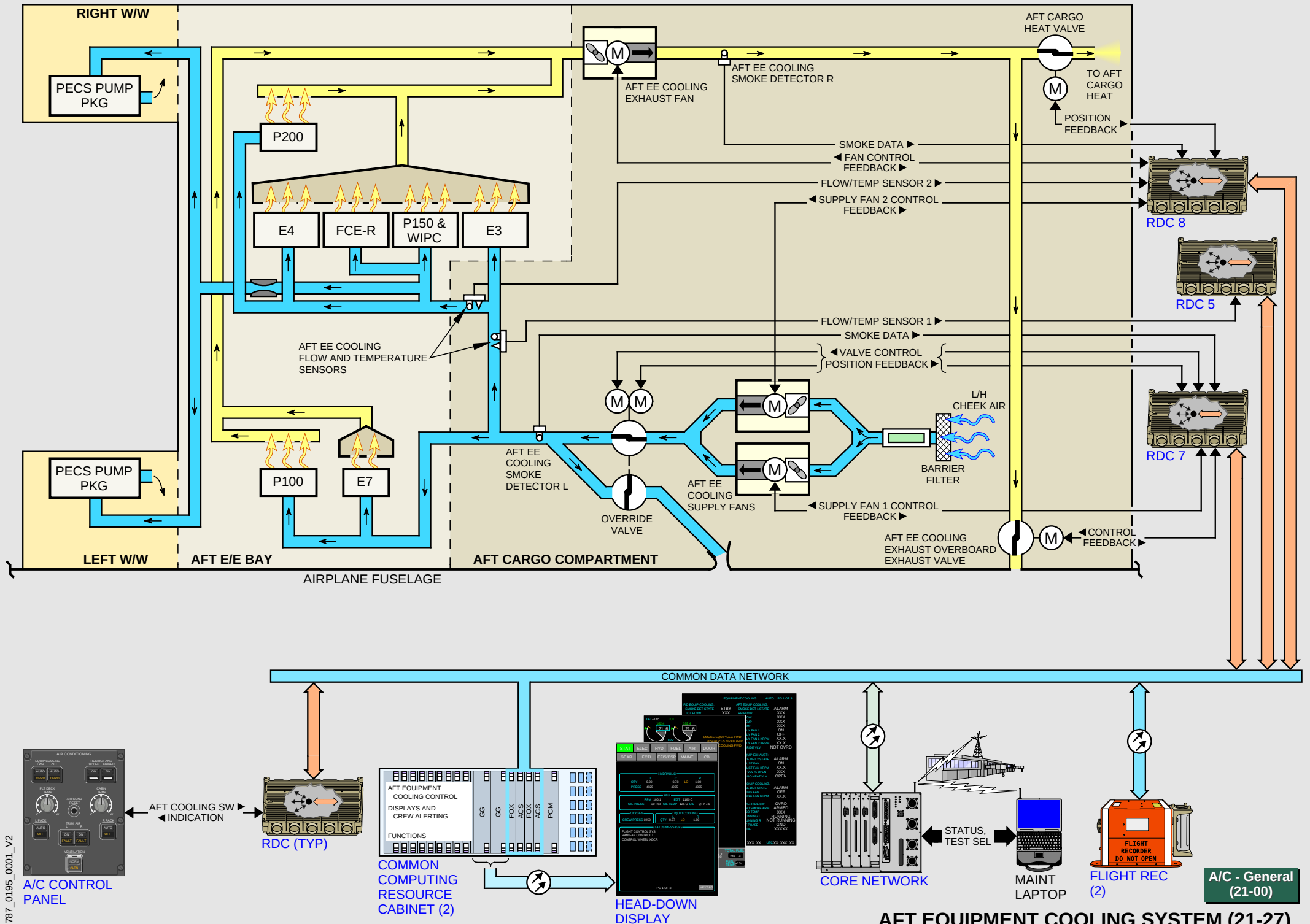
A/C - General (21-00)

LAVATORY/GALLEY VENTILATION SYSTEM (21-26)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0195_0001_V2

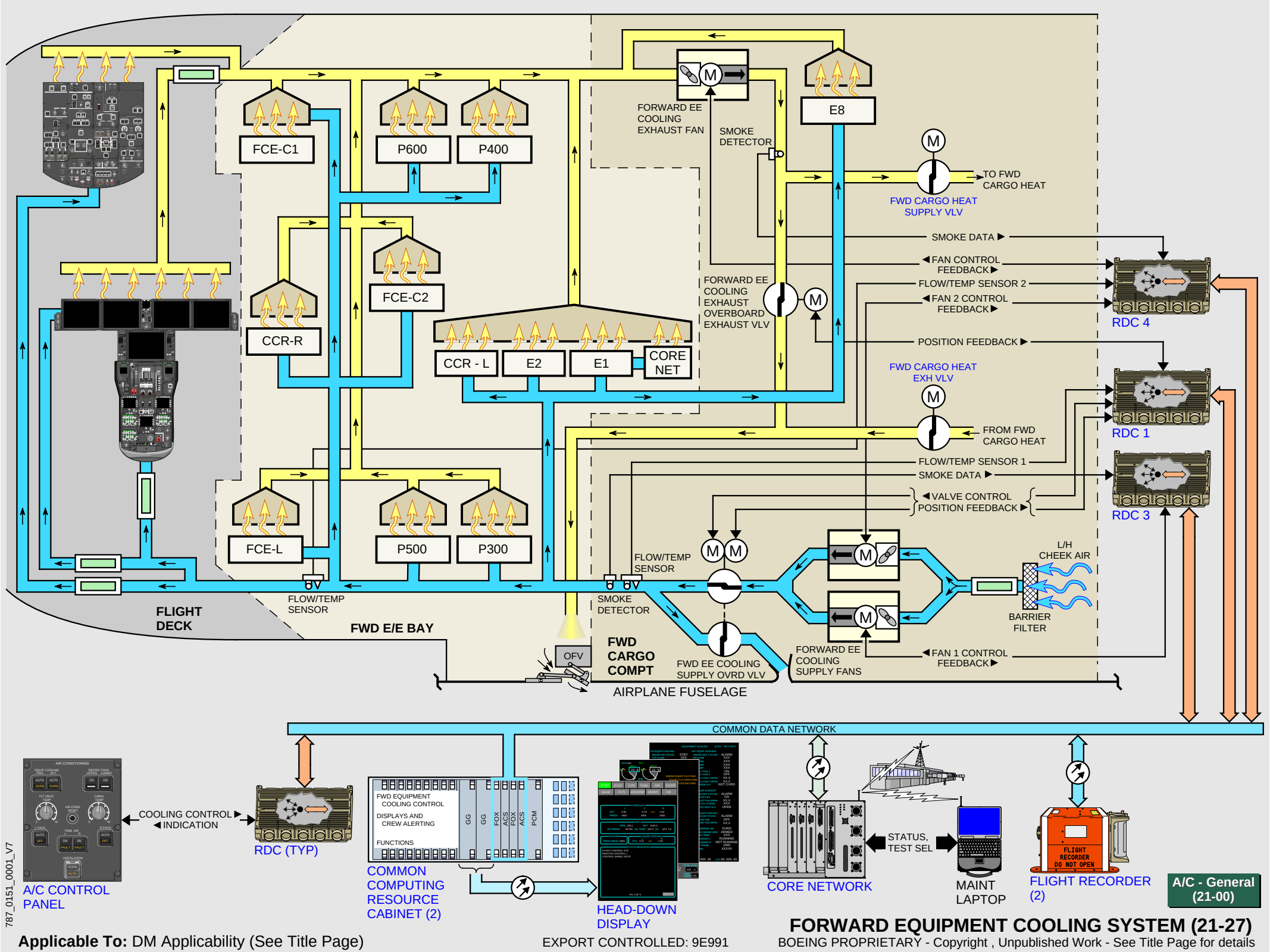
A/C - General (21-00)

AFT EQUIPMENT COOLING SYSTEM (21-27)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0151_0001_V7

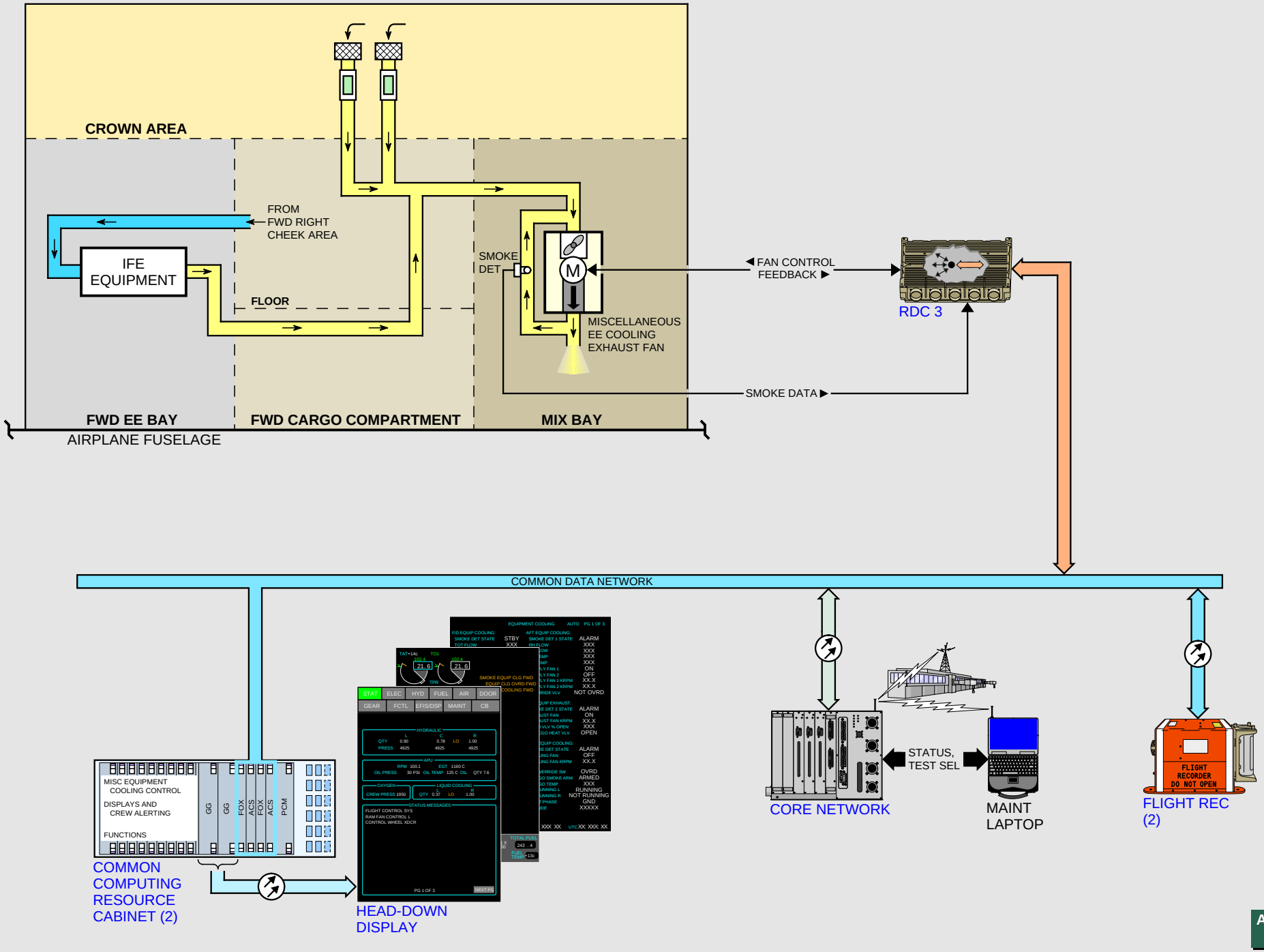
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

FORWARD EQUIPMENT COOLING SYSTEM (21-27)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

A/C - General (21-00)



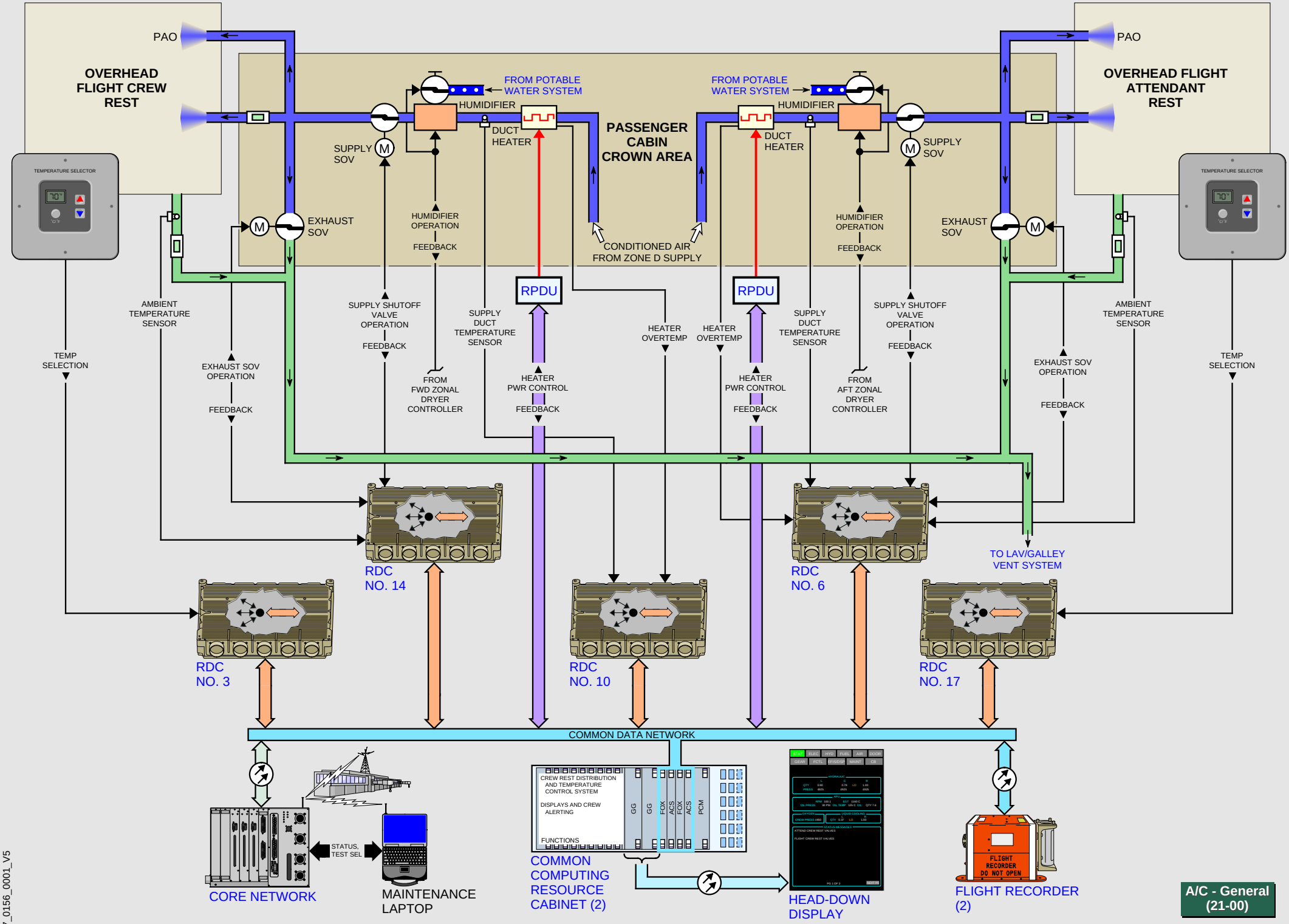
787_0196_0001_V1

A/C - General
(21-00)

MISCELLANEOUS EQUIPMENT COOLING SYSTEM (21-27)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



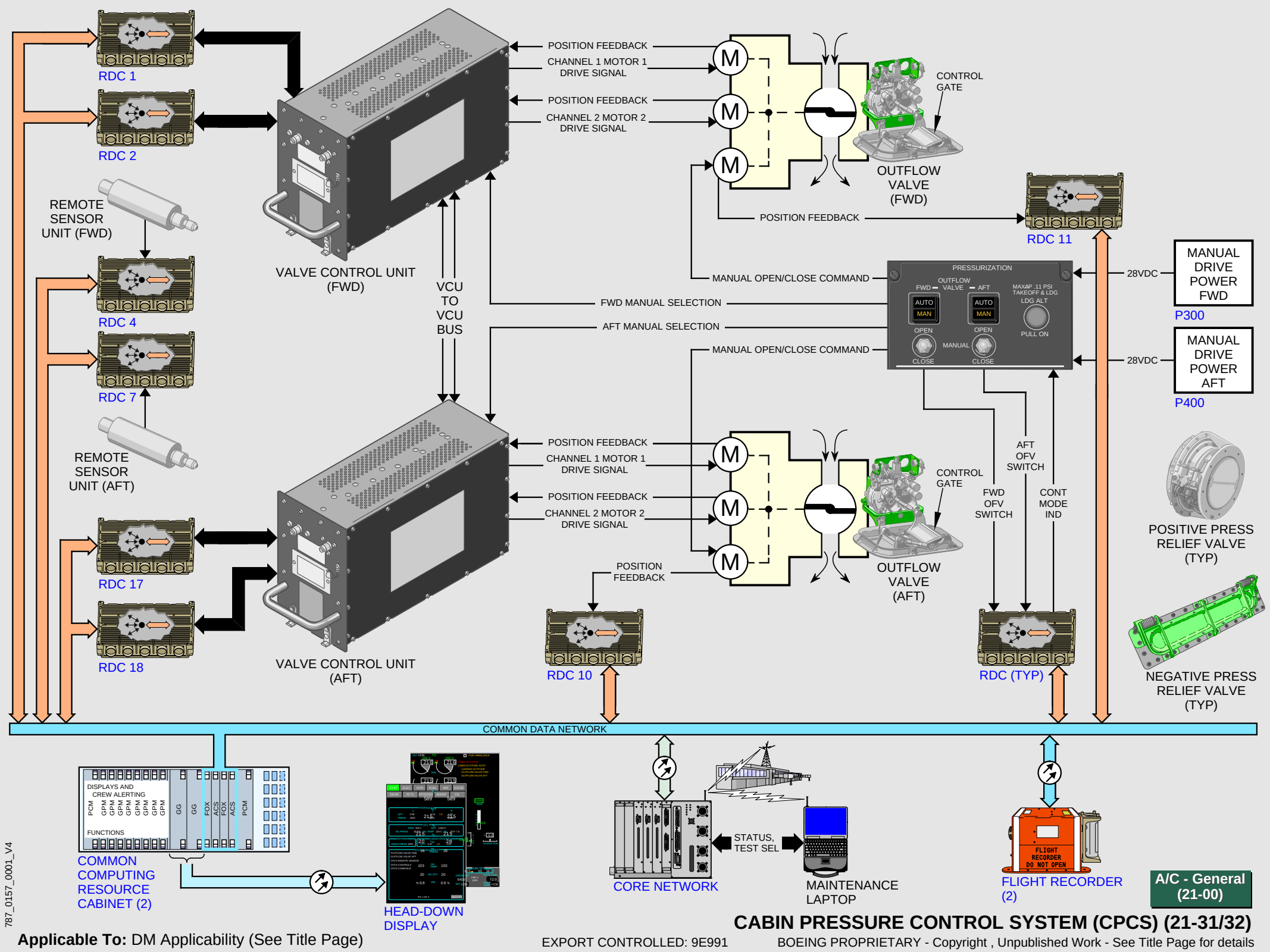
A/C - General (21-00)

OVERHEAD FLIGHT/ATTENDANT CREW REST AIR DISTRIBUTION/HEATING SYSTEM (21-29/41)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



A/C - General (21-00)

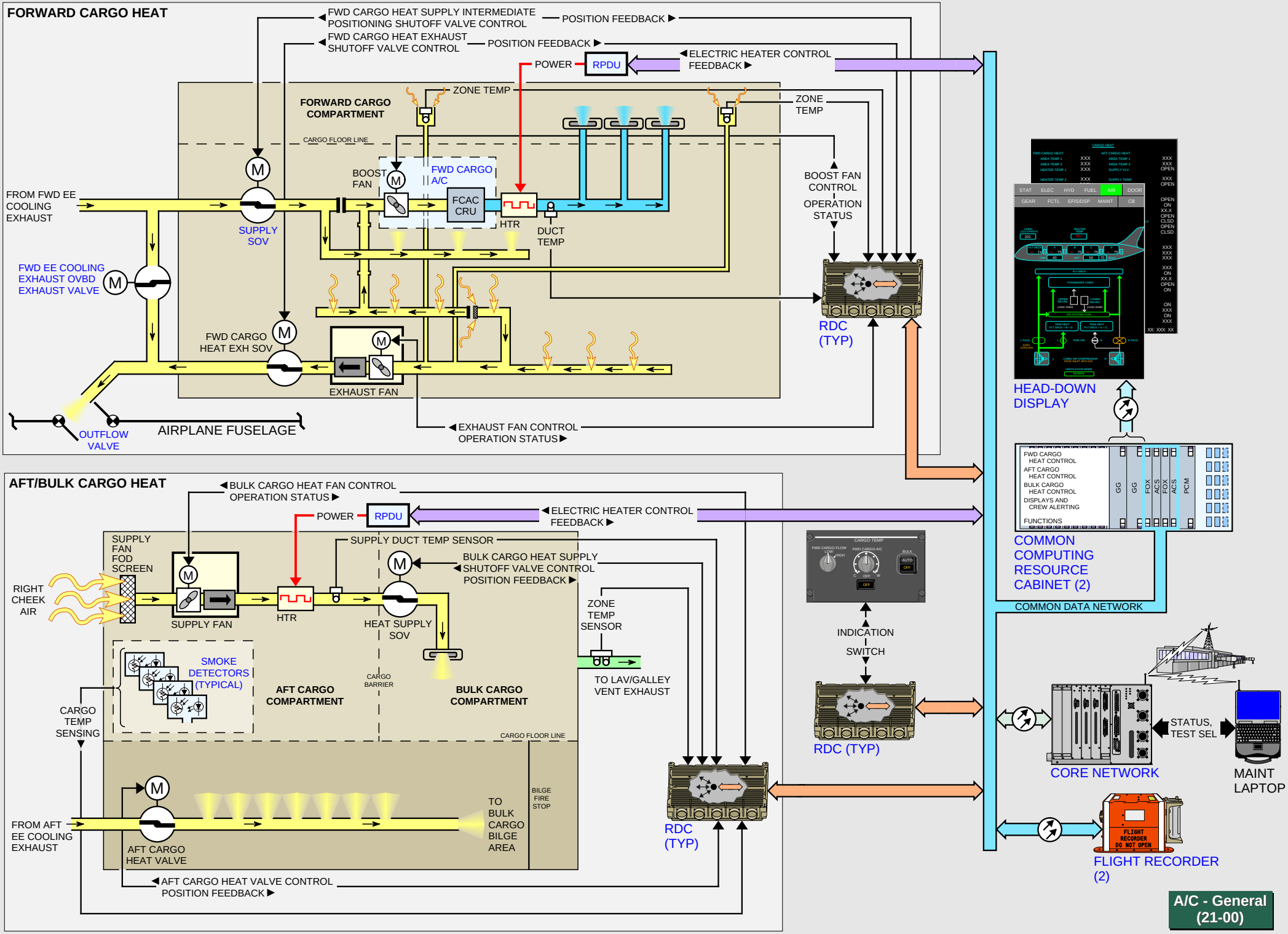
CABIN PRESSURIZATION CONTROL SYSTEM (CPCS) (21-31/32)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

787_0157_0001_V4



A/C - General (21-00)

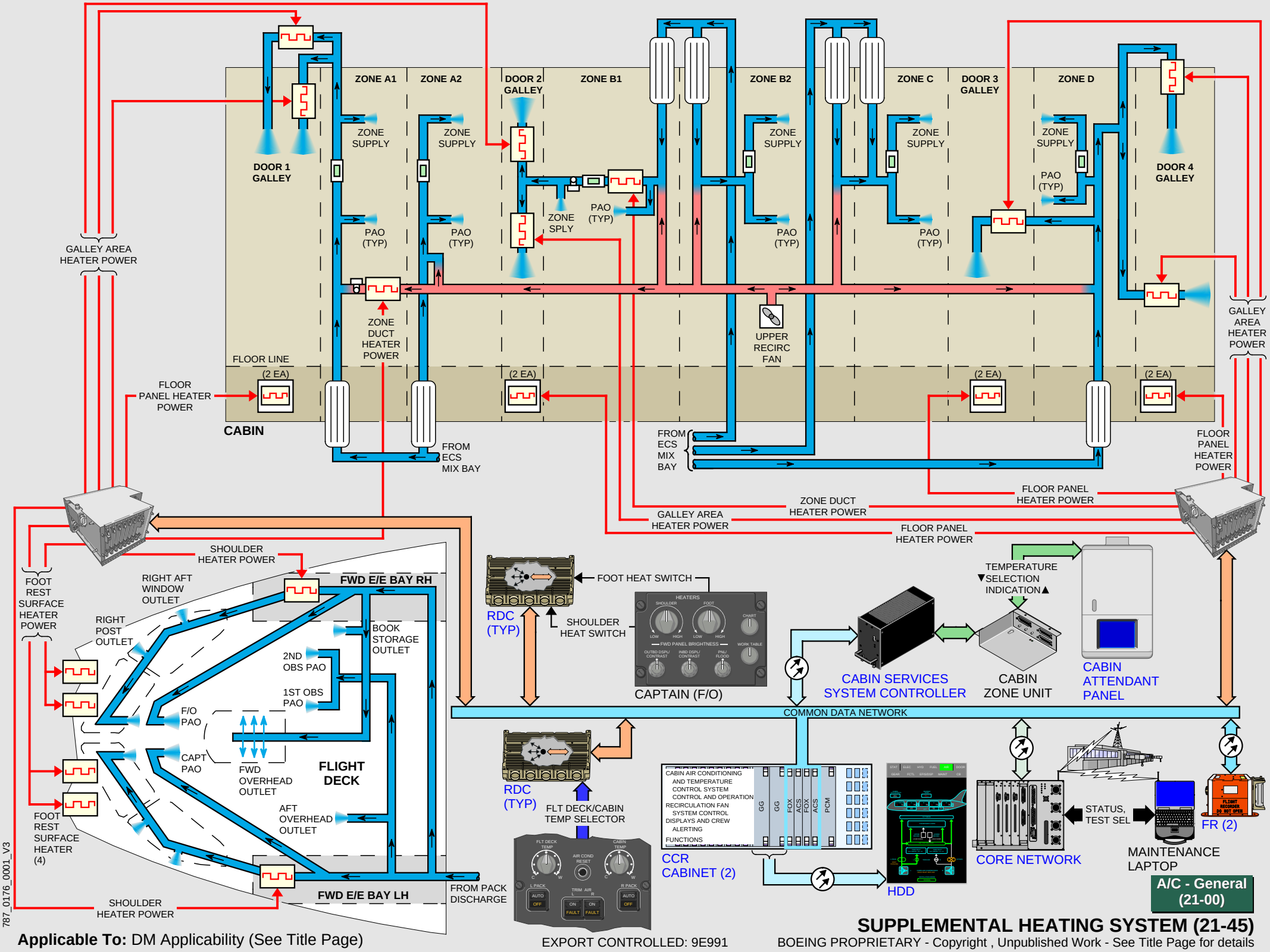
FORWARD/AFT/BULK CARGO HEAT SYSTEM (21-43/44)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

787_0056_0001_V8



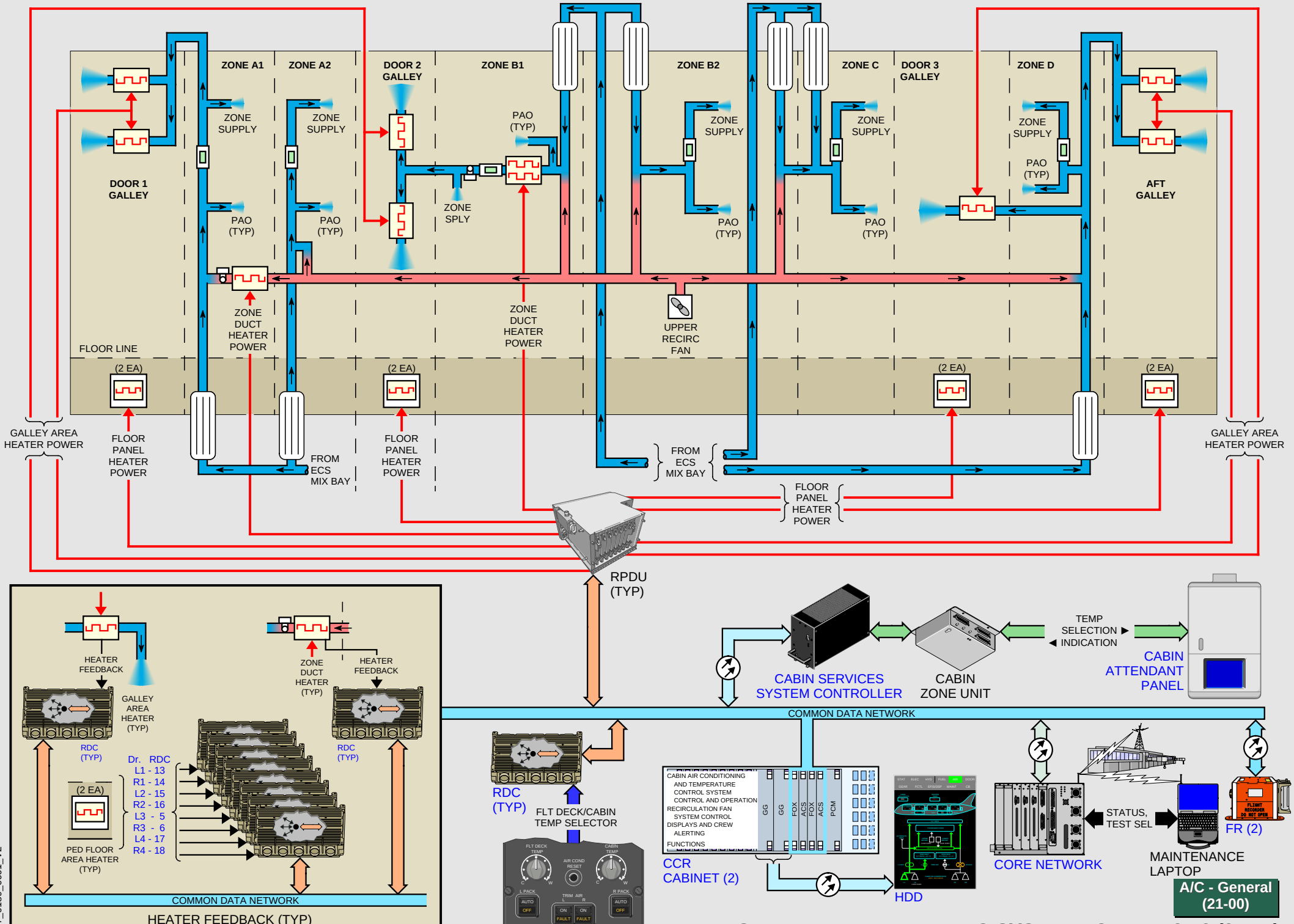
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

SUPPLEMENTAL HEATING SYSTEM (21-45)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

A/C - General (21-00)



787_0189_0001_V2

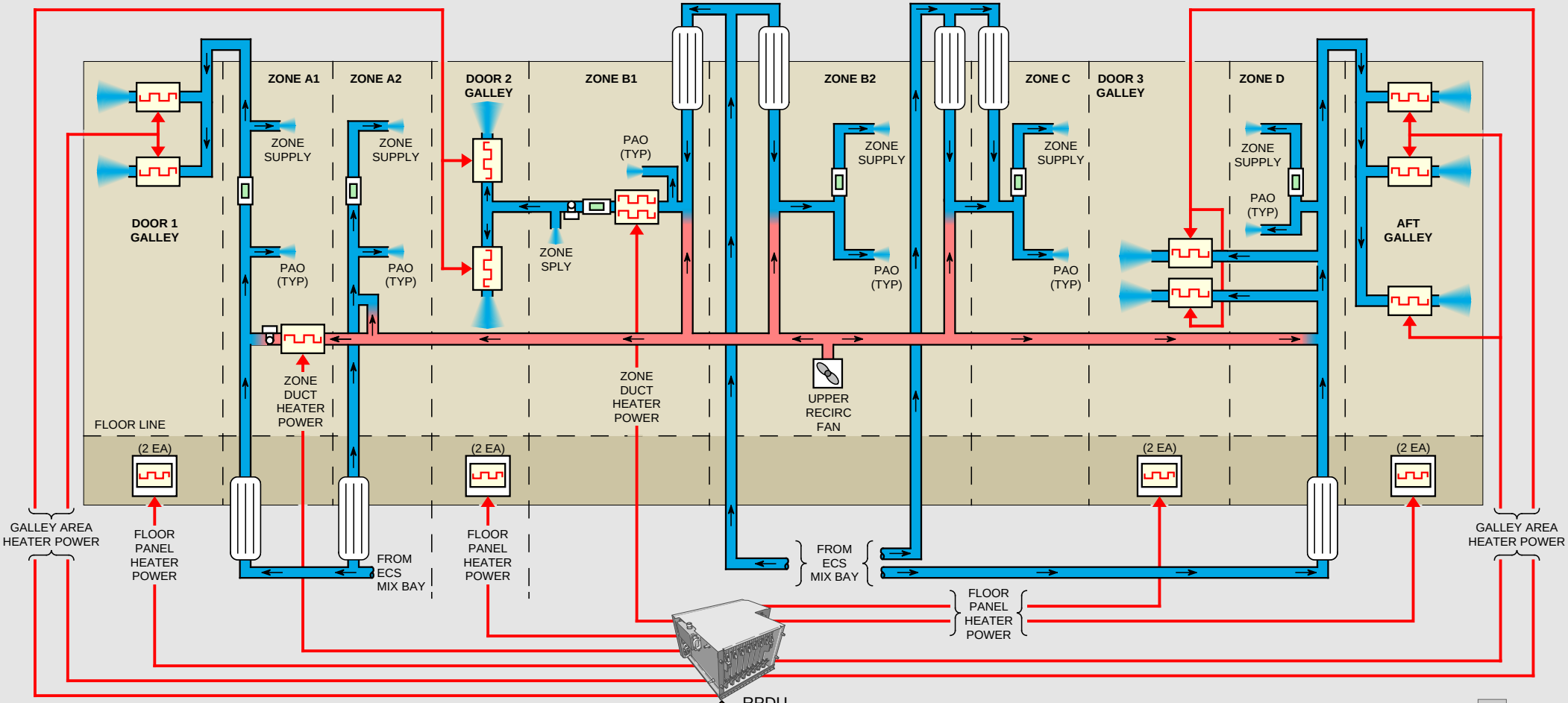
Applicable To: DM Applicability (See Title Page)

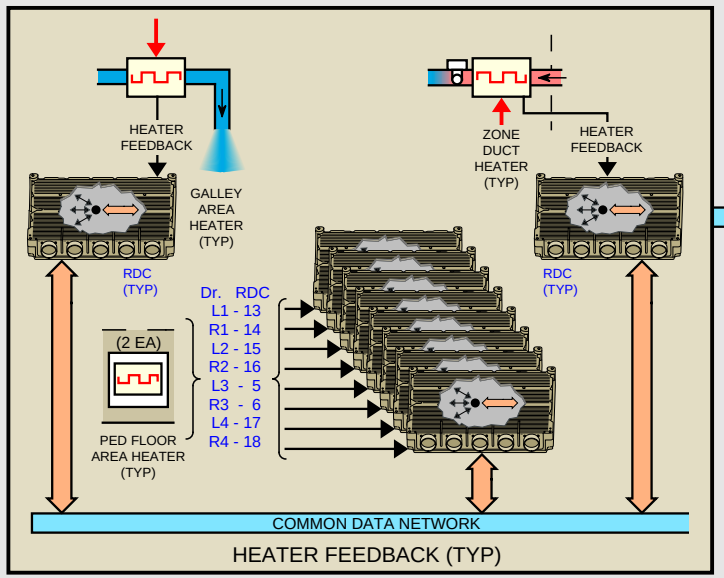
EXPORT CONTROLLED: 9E991

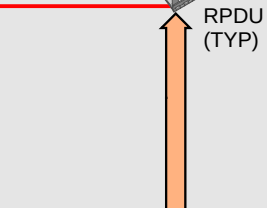
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

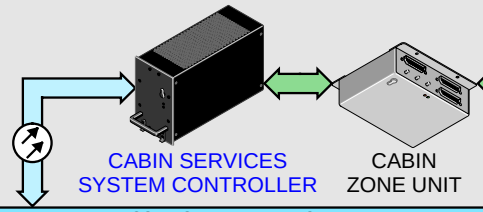
SUPPLEMENTAL HEATING SYSTEM - CABIN 787-8 (21-45)

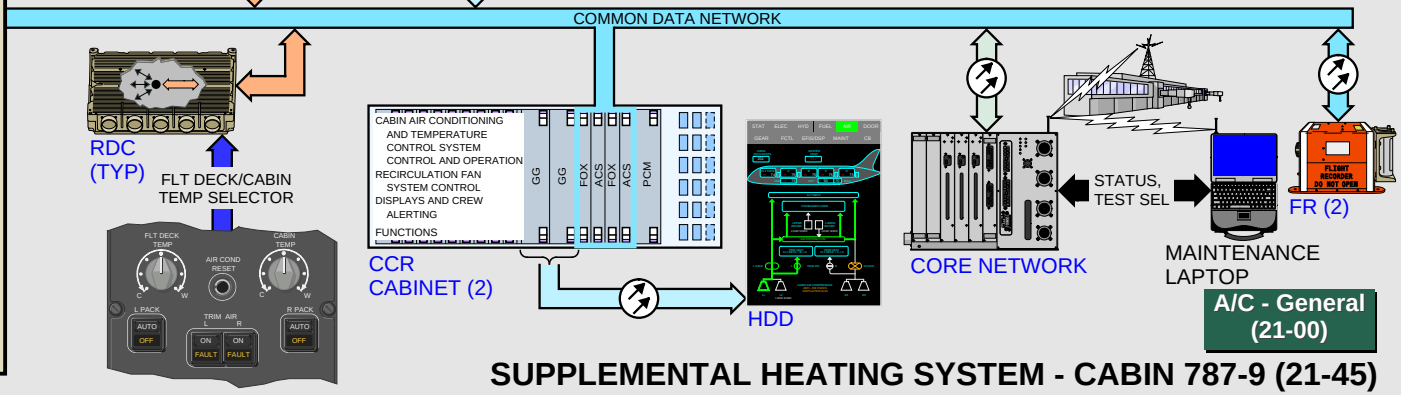
A/C - General (21-00)











787_0189_0002_V2

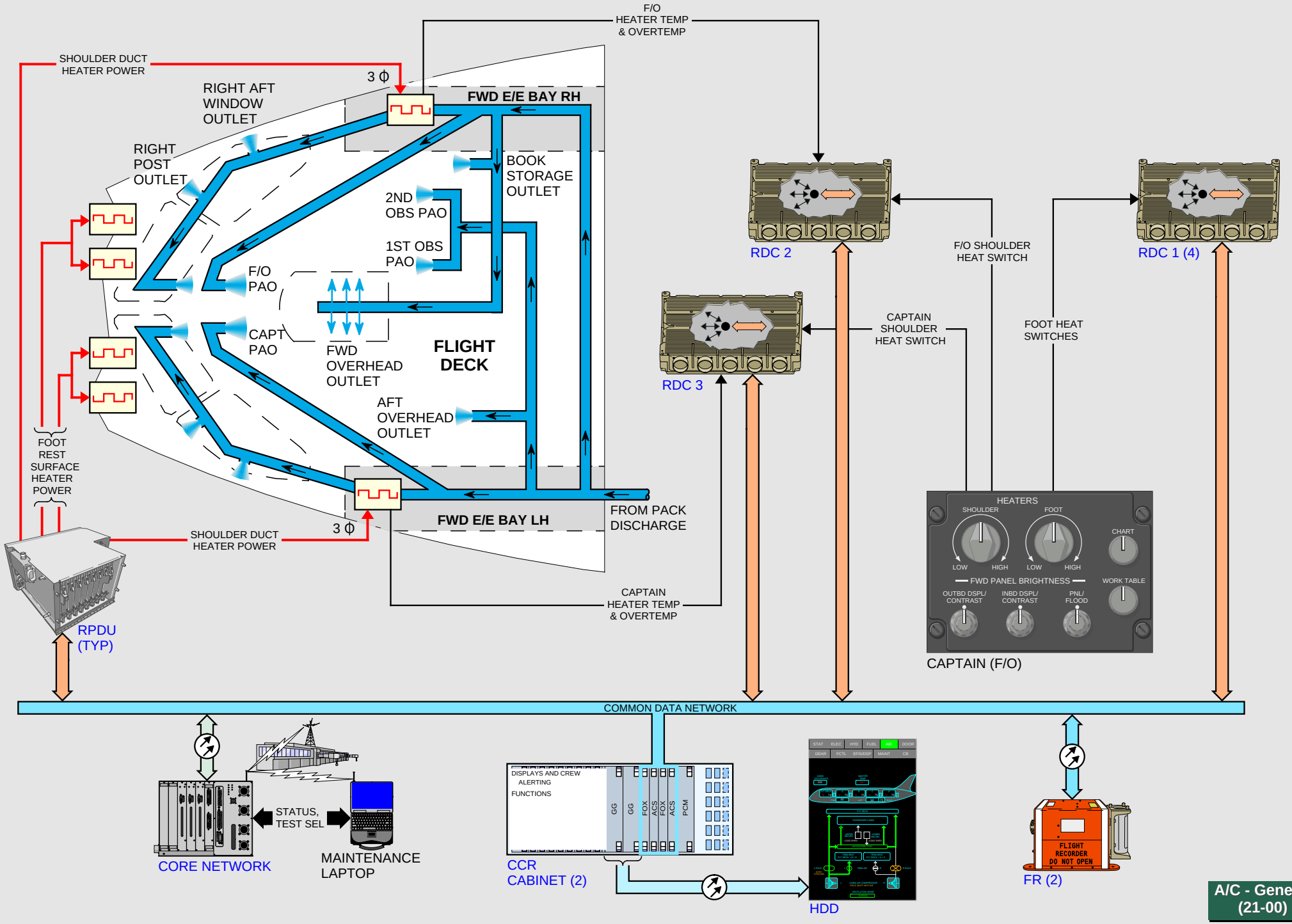
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

SUPPLEMENTAL HEATING SYSTEM - CABIN 787-9 (21-45)

A/C - General (21-00)



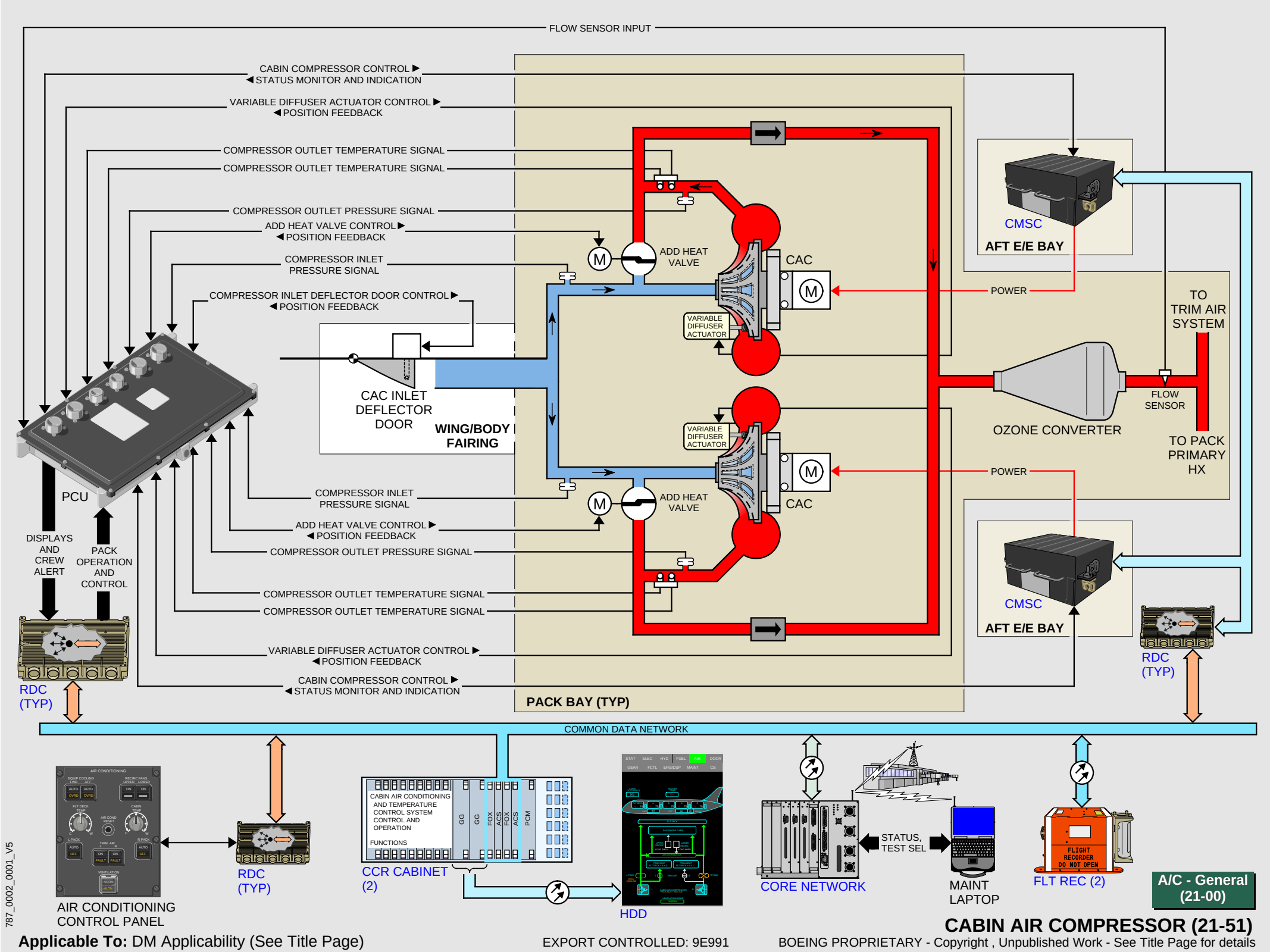
A/C - General (21-00)

SUPPLEMENTAL HEATING SYSTEM - FLT DECK (21-45)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0002_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

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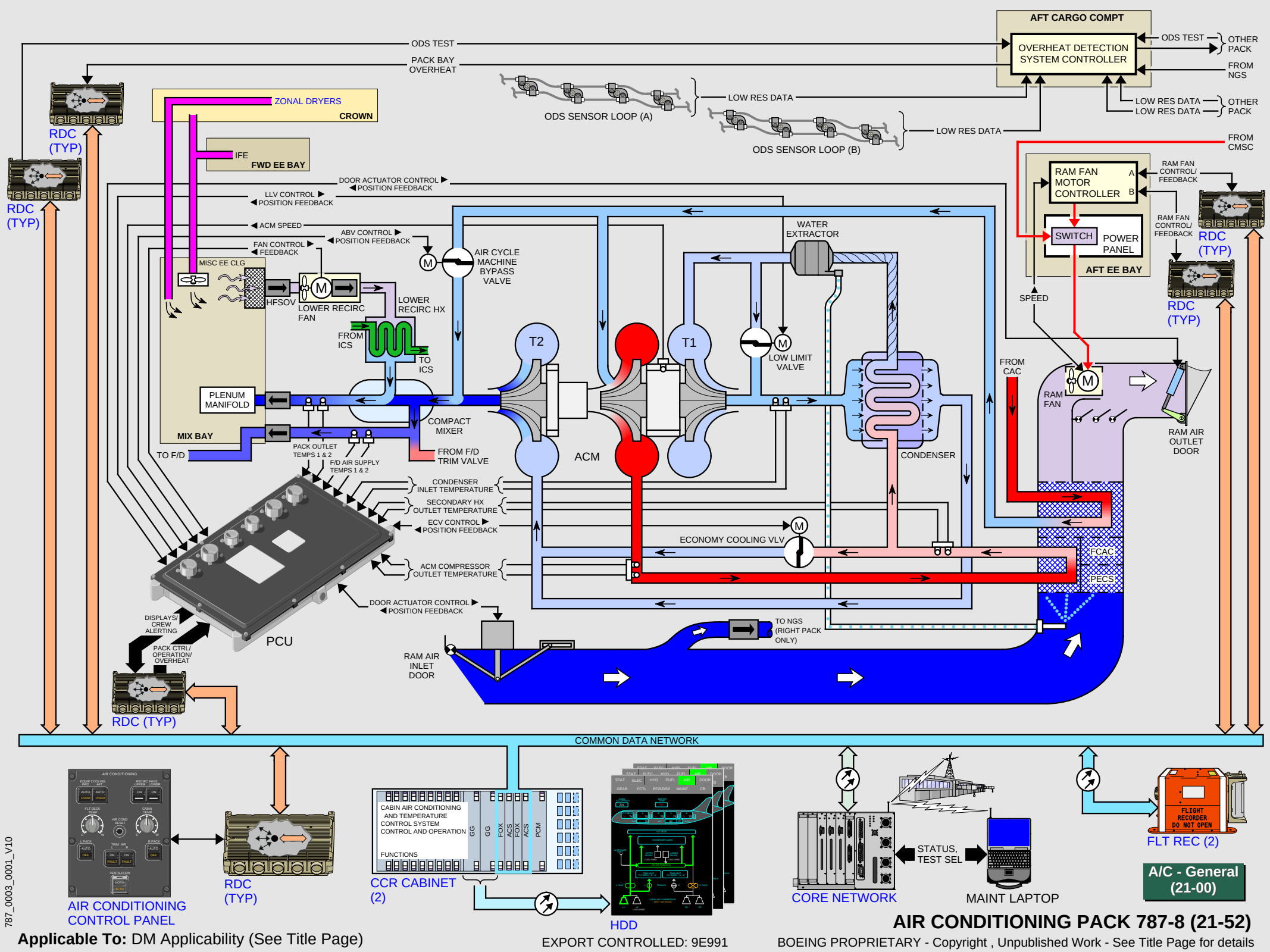
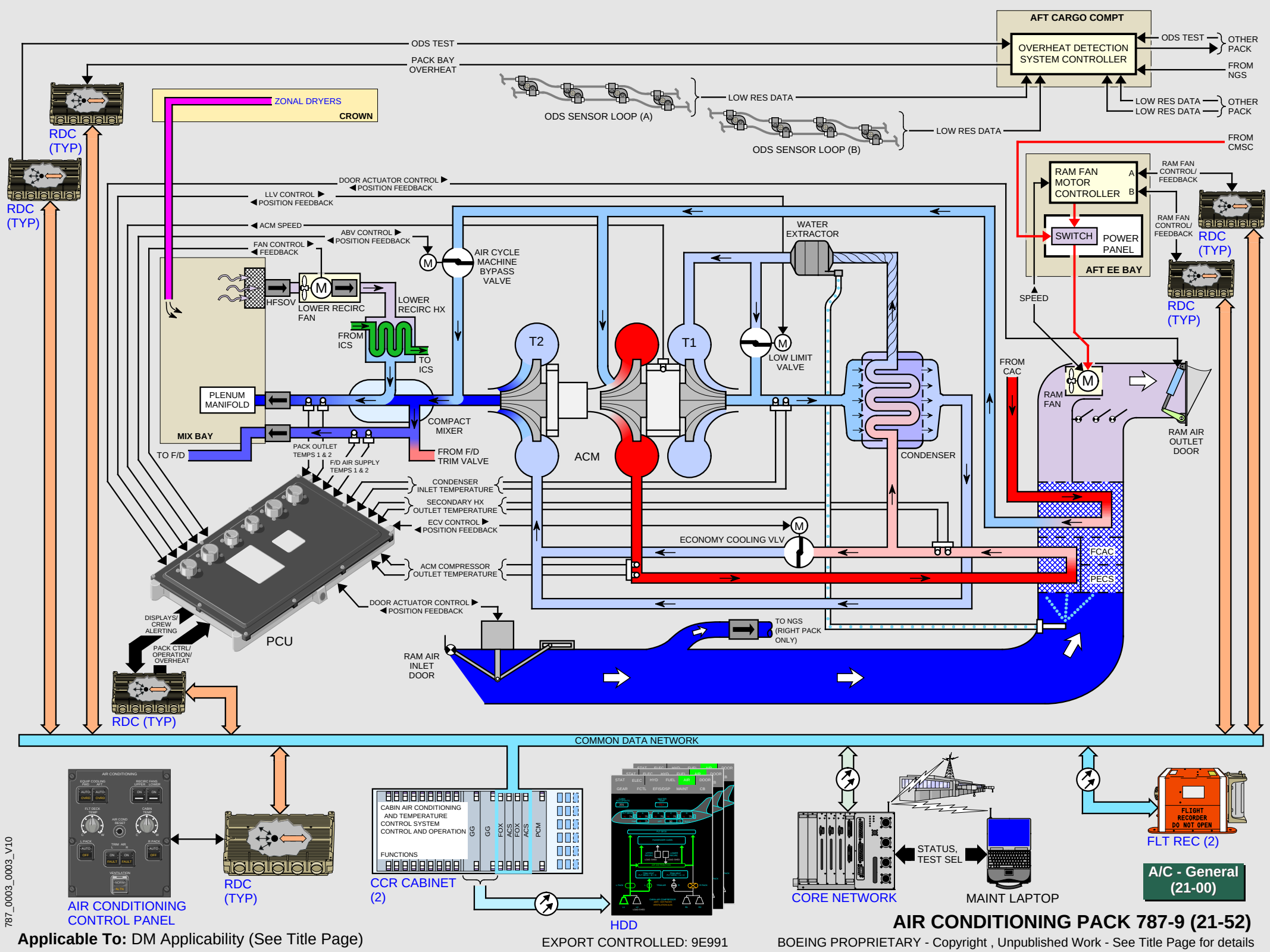


BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

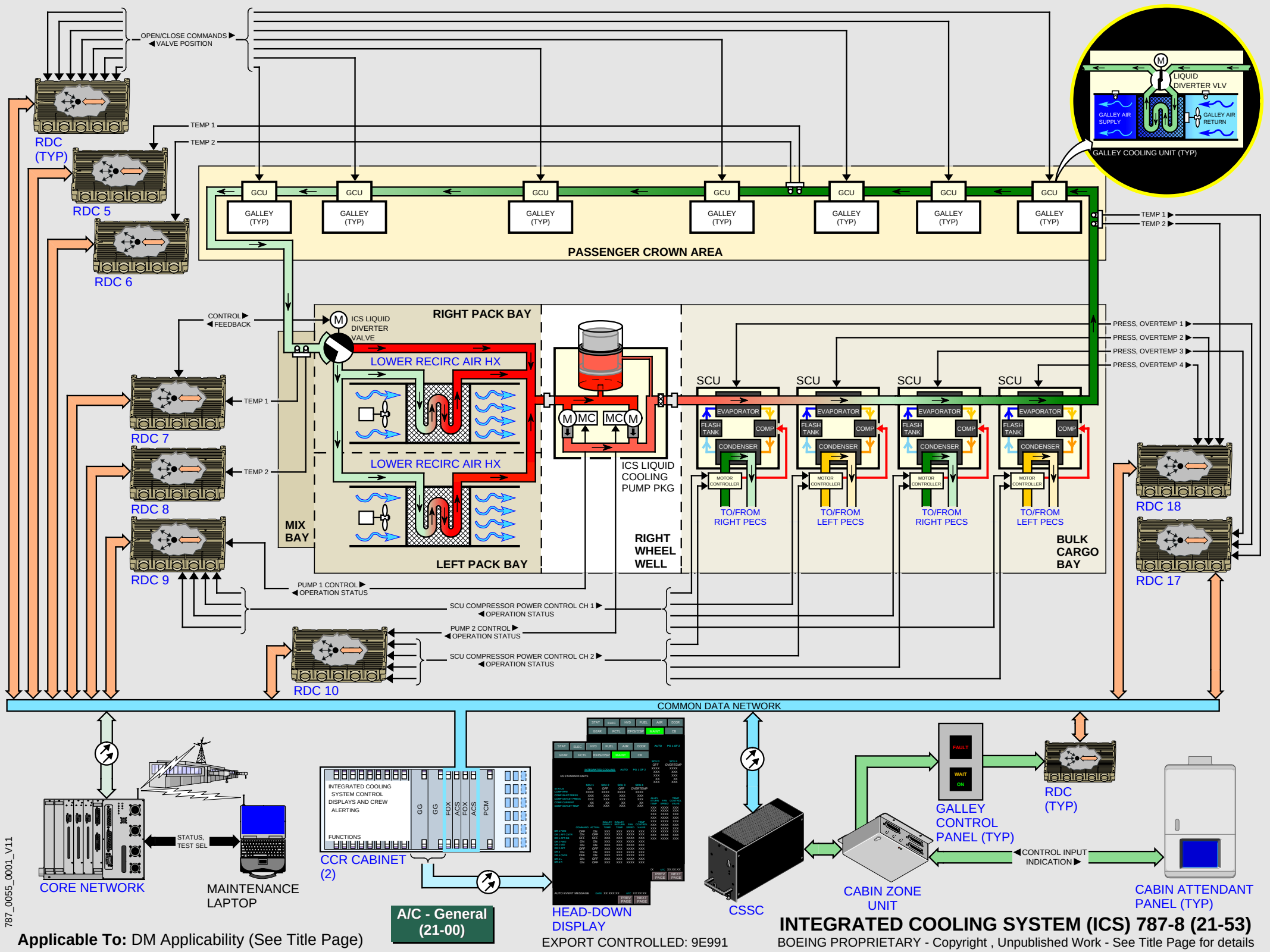


AIR CONDITIONING PACK 787-9 (21-52)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0055_0001_V11

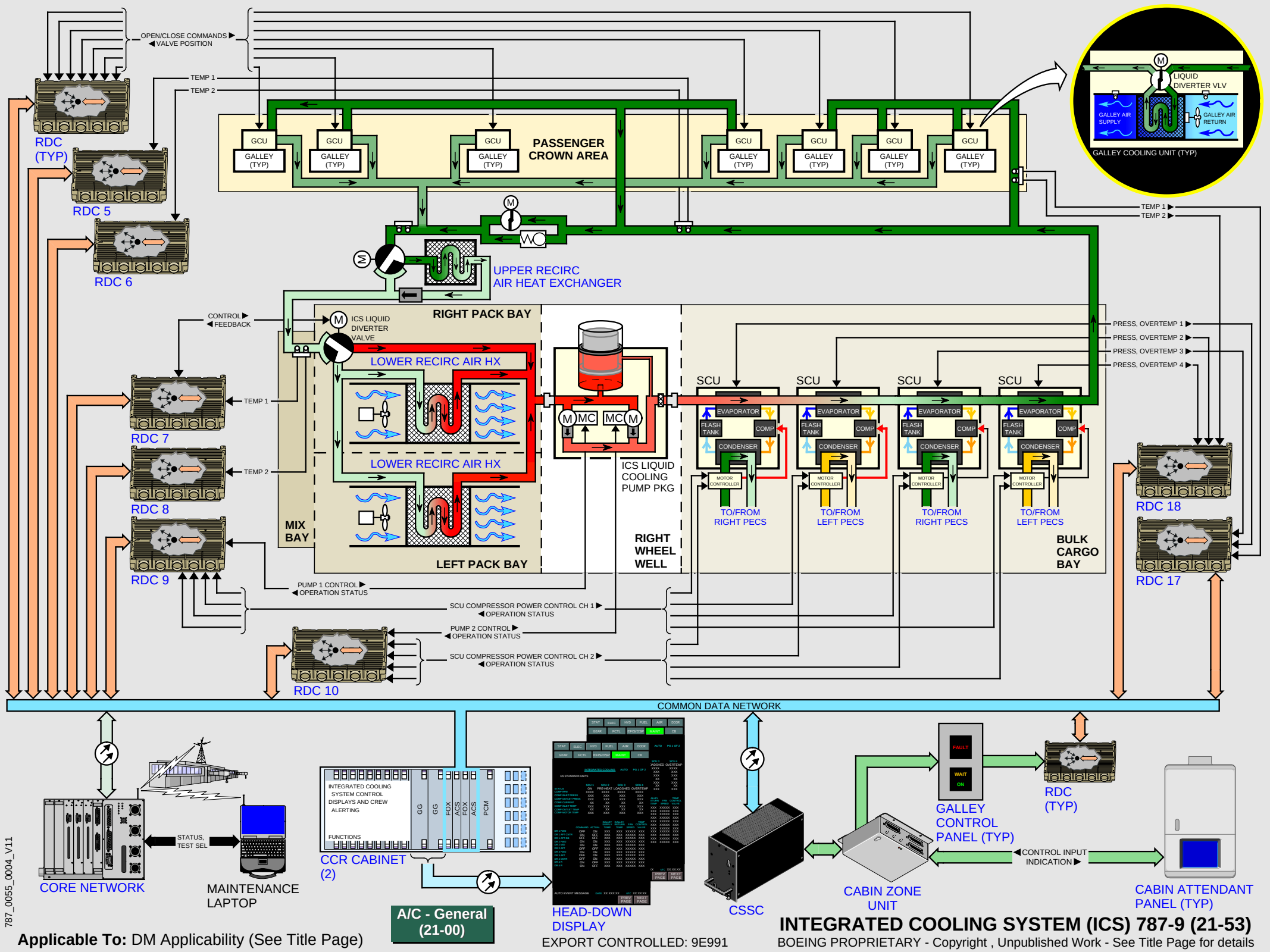
Applicable To: DM Applicability (See Title Page)

A/C - General (21-00)

EXPORT CONTROLLED: 9E991

INTEGRATED COOLING SYSTEM (ICS) 787-8 (21-53)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0055_0004_V11

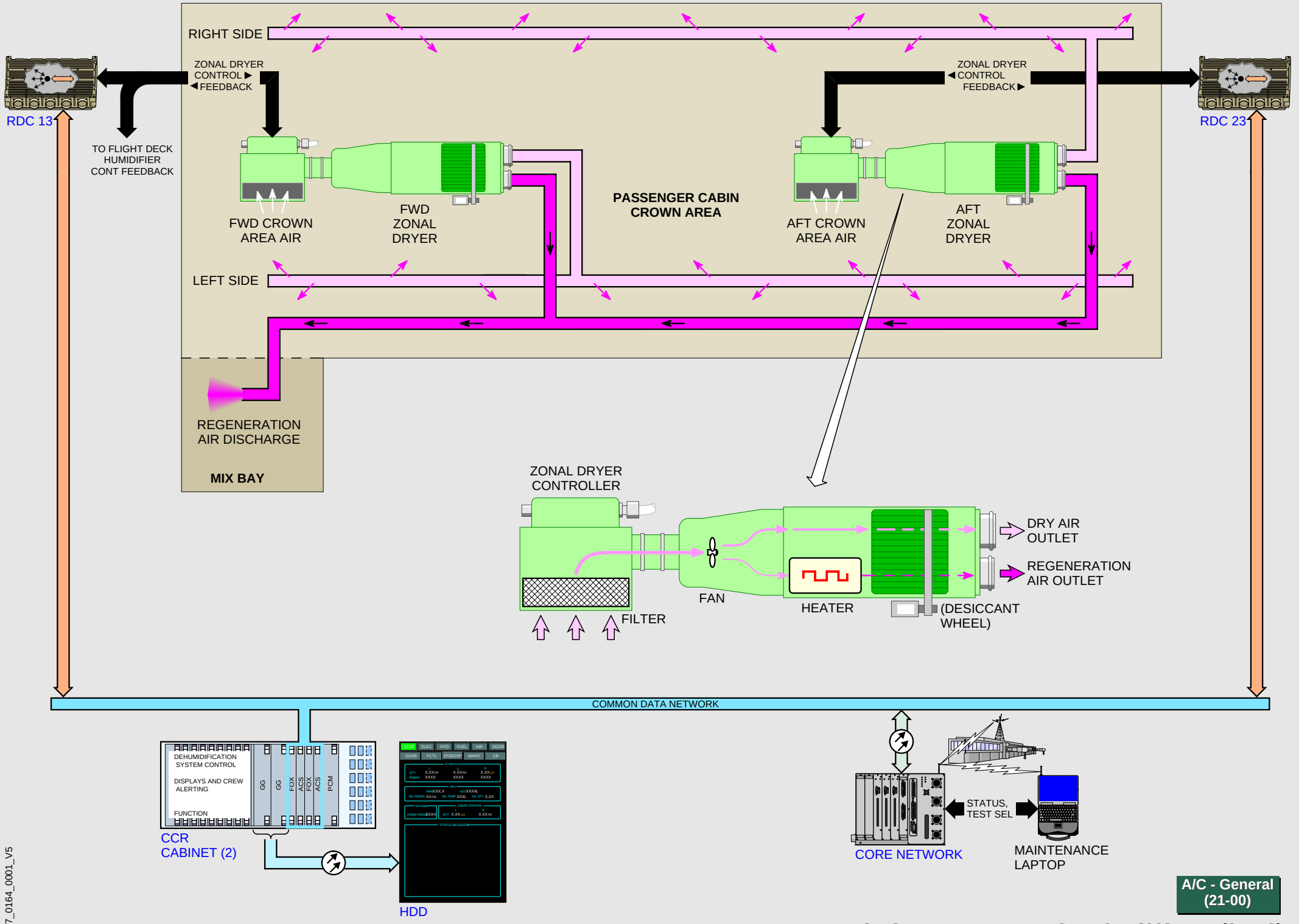
Applicable To: DM Applicability (See Title Page)

A/C - General (21-00)

EXPORT CONTROLLED: 9E991

INTEGRATED COOLING SYSTEM (ICS) 787-9 (21-53)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0164_0001_V5

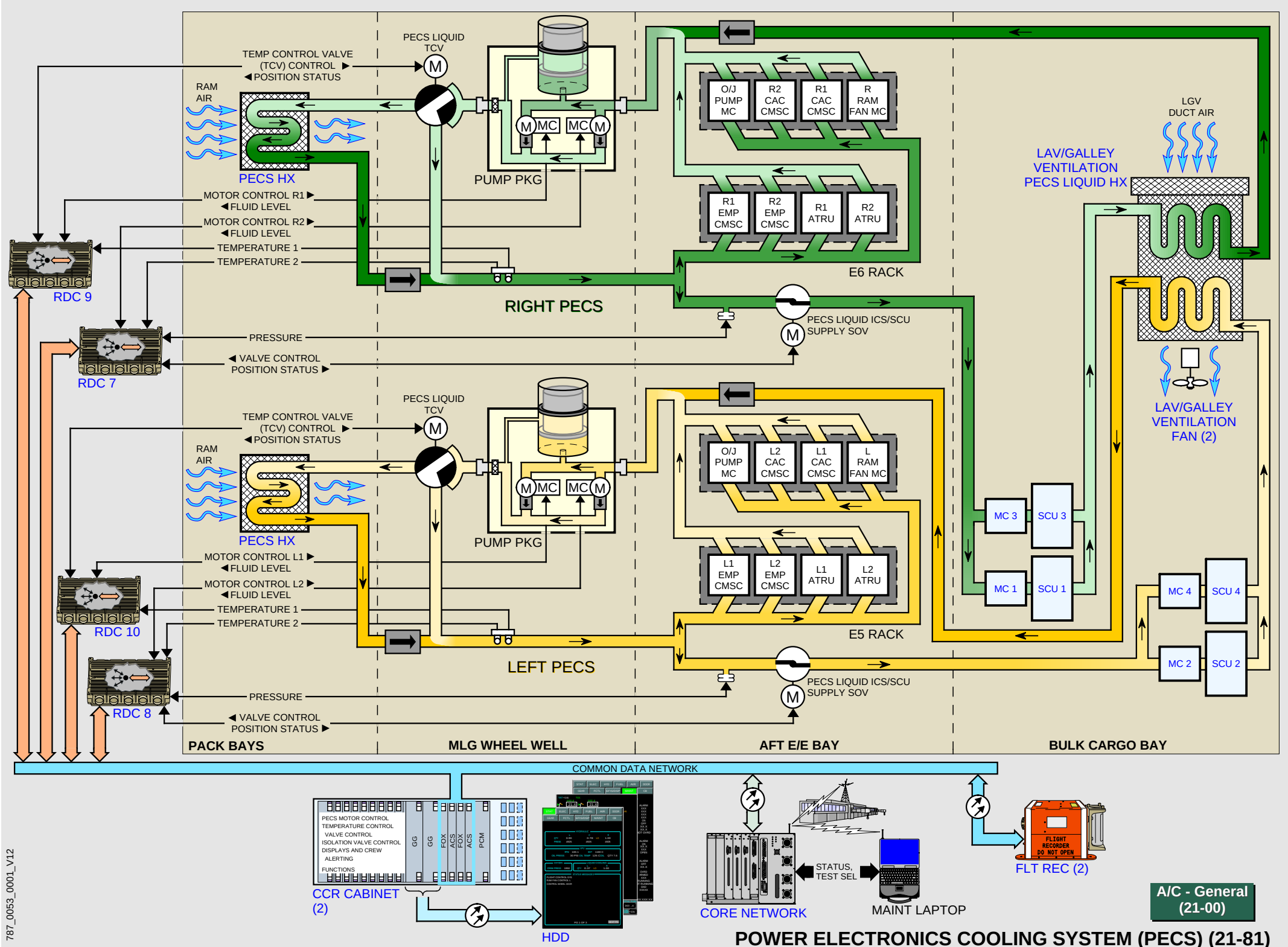
A/C - General (21-00)

CROWN DEHUMIDIFICATION SYSTEM (21-72)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0053_0001_V12

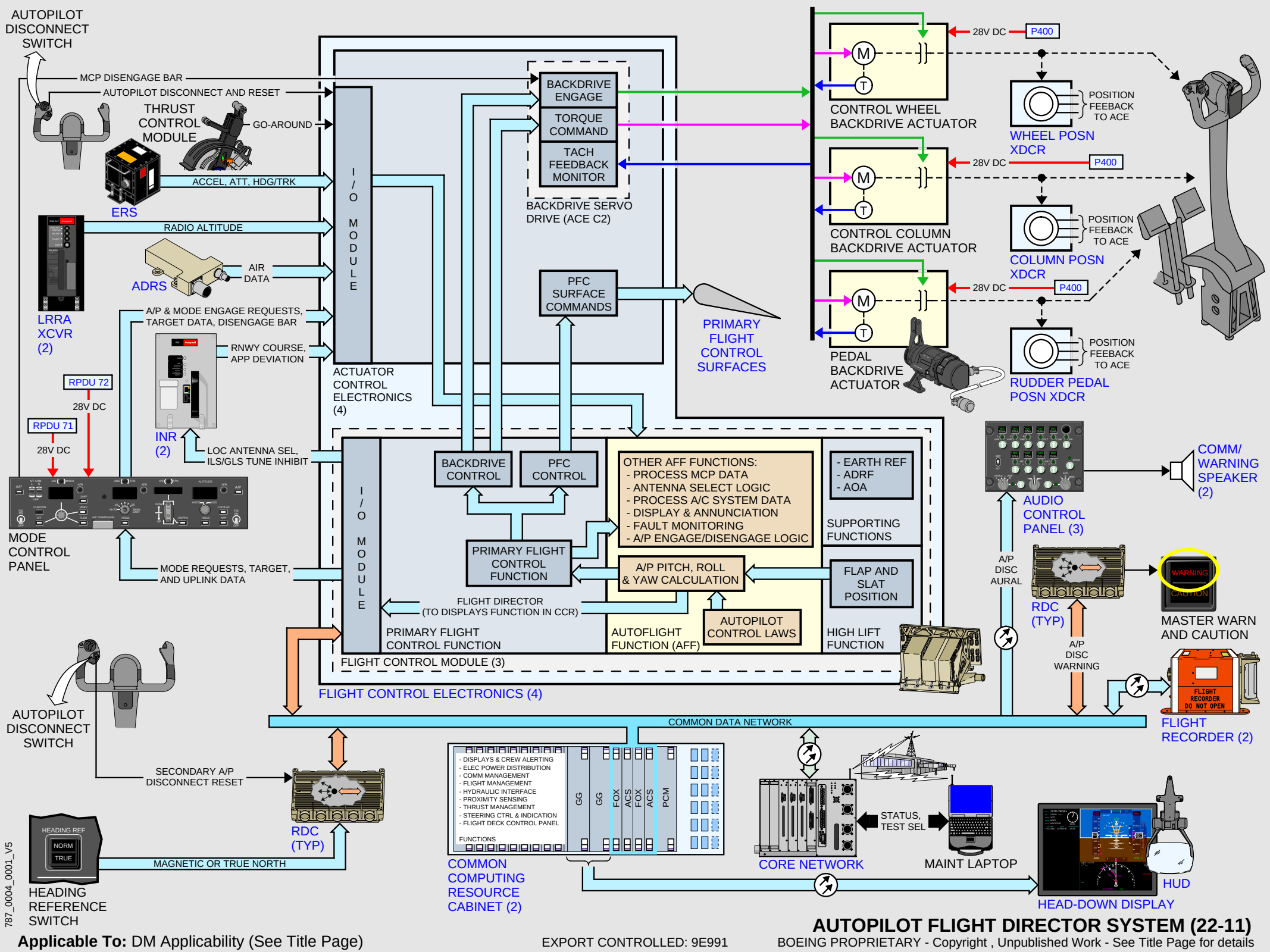
A/C - General
(21-00)

POWER ELECTRONICS COOLING SYSTEM (PECS) (21-81)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



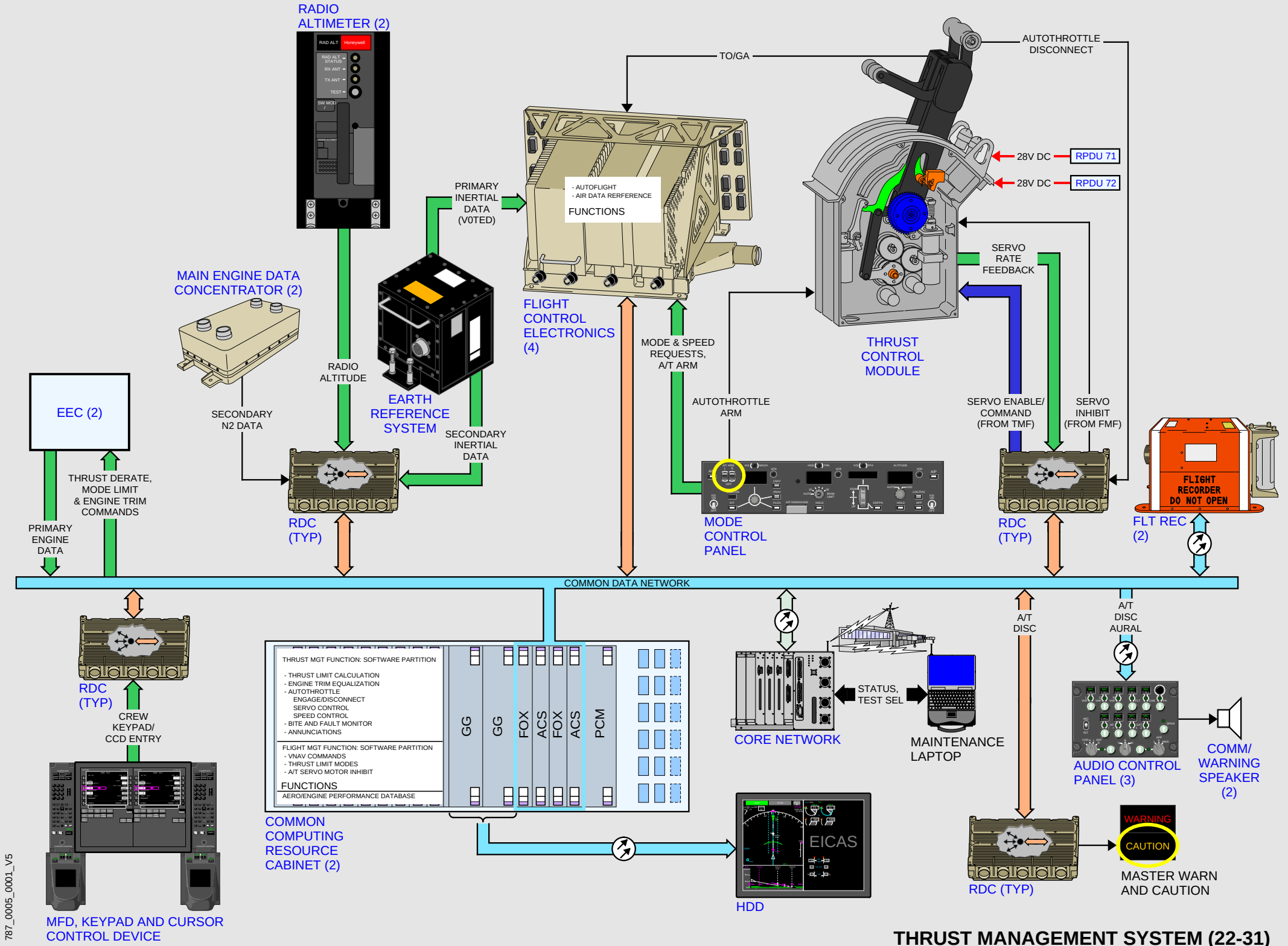
787_0004_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

AUTOPILOT FLIGHT DIRECTOR SYSTEM (22-11)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



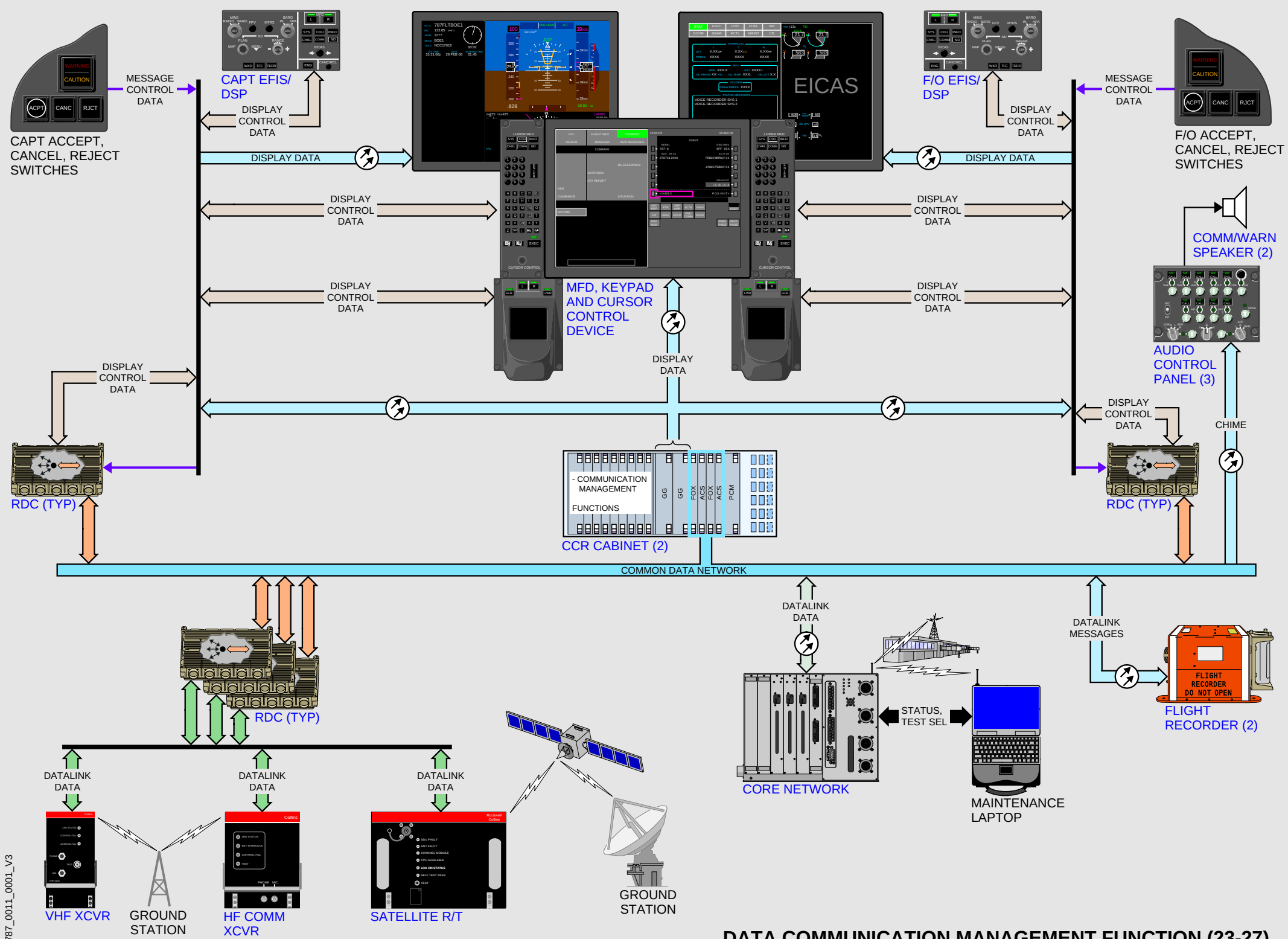
787_0005_0001_V5

THRUST MANAGEMENT SYSTEM (22-31)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



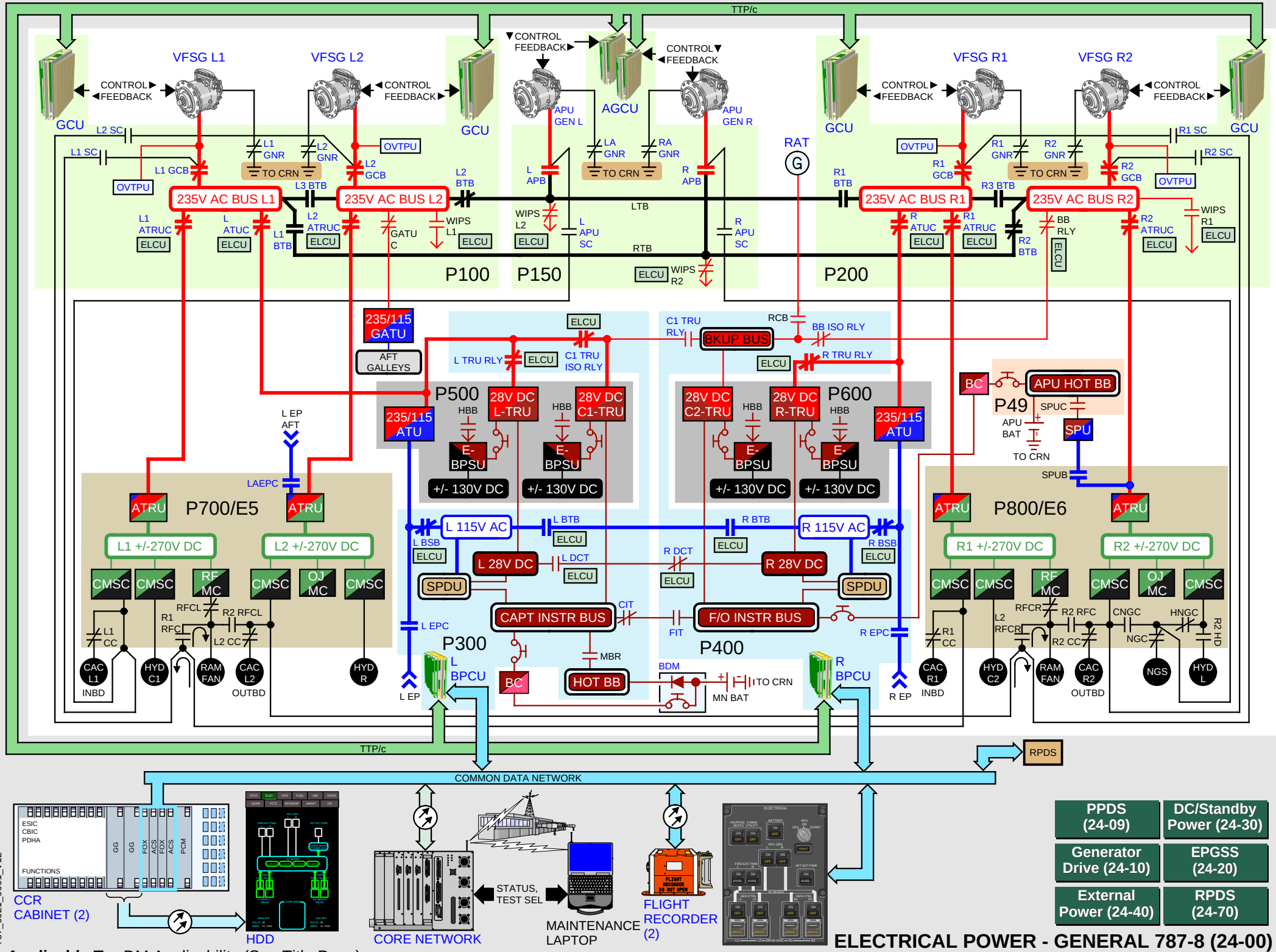
787_0011_0001_V3

Applicable To: DM Applicability (See Title Page)

DATA COMMUNICATION MANAGEMENT FUNCTION (23-27)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



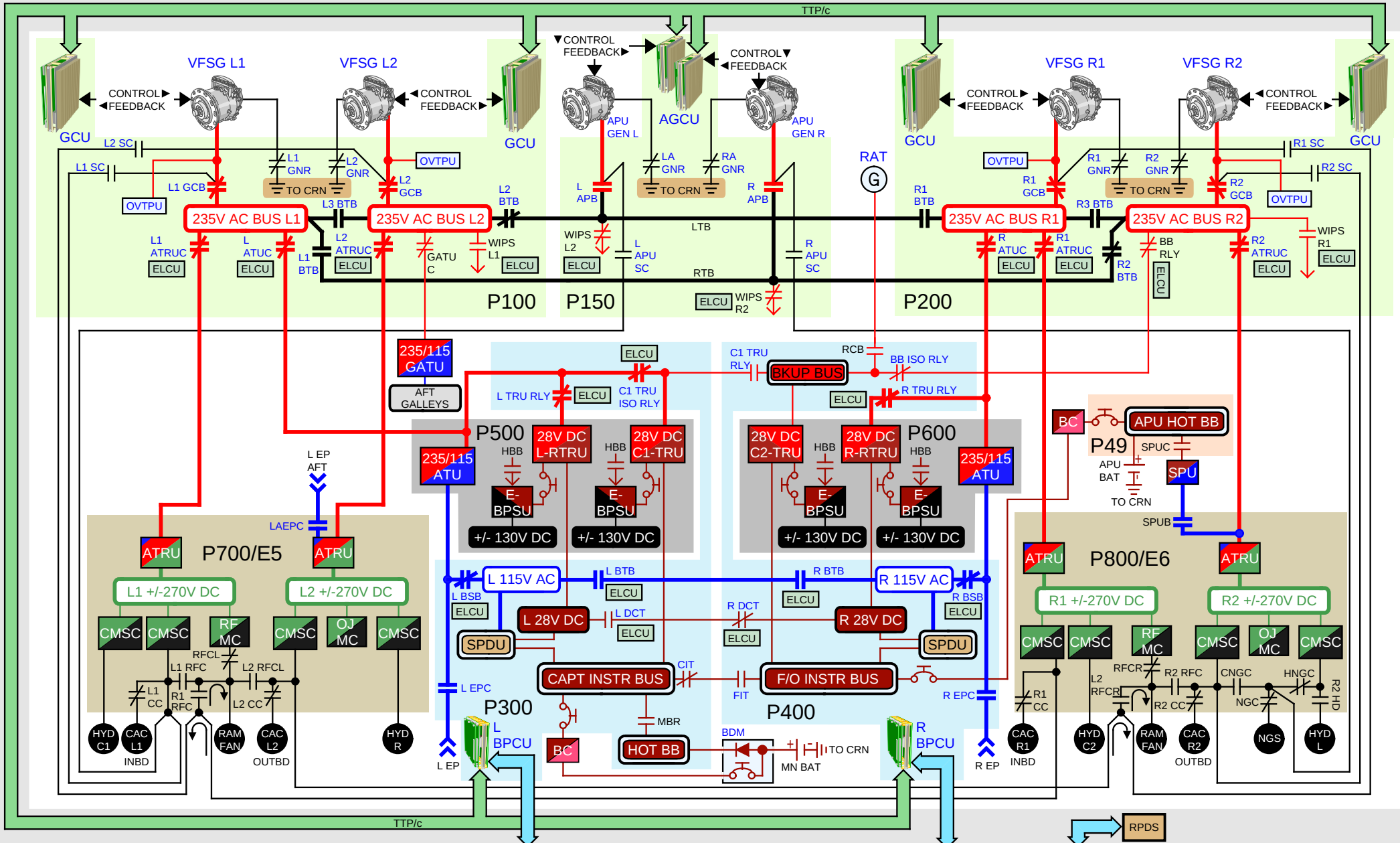
787_0021_0001_V12

ELECTRICAL POWER - GENERAL 787-8 (24-00)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



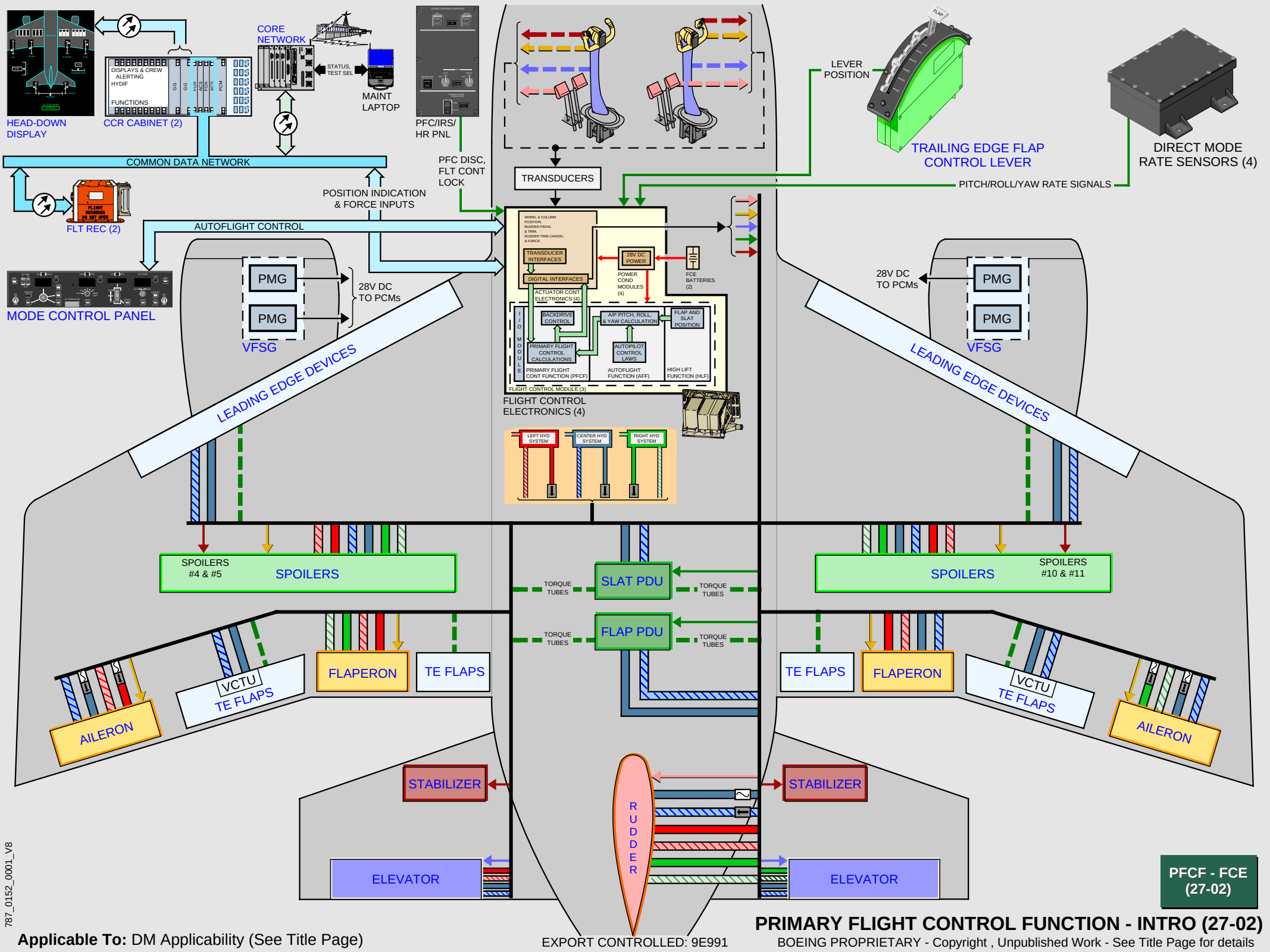
PPDS (24-09) | DC/Standby Power (24-30)
Generator Drive (24-10) | EPGSS (24-20)
External Power (24-40) | RPDS (24-70)

787_0021_0002_V3

Applicable To: DM Applicability (See Title Page)

ELECTRICAL POWER - GENERAL 787-9 (24-00)

EXPORT CONTROLLED: 9E991
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



PFCF - FCE (27-02)

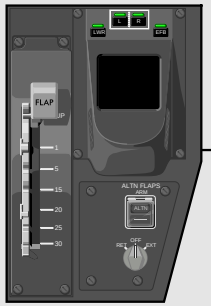
PRIMARY FLIGHT CONTROL FUNCTION - INTRO (27-02)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

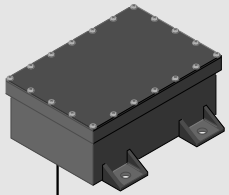
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

787_0152_0001_V8



TRAILING EDGE FLAP CONTROL LEVER

HIGH LIFT INPUT



DIRECT MODE RATE SENSOR (4)

LEFT ENGINE

PMG

PMG

RIGHT ENGINE

PMG

PMG

CAPT FLT INST BUS

F/O FLT INST BUS

HOT BATT BUS

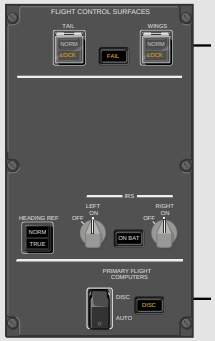
NC

L 28V DC BUS

FCE BATTERIES

R 28V DC BUS

FCE BATTERIES



SURFACE LOCK

PFC DIRECT MODE

PFC/IRS/HR PANEL

TO FLIGHT CONTROL SURFACES

PCM C1

PCM C2

PCM L

PCM R

POWER CONDITIONING MODULES

FLAP/SLAT EMCUs, ISFD, REUs, SREUs

MODE CONTROL PANEL

I / O MODULE

SURFACE COMMANDS

TRANSDUCER INTERFACES

WHEEL & COLUMN POSITION, RUDDER PEDAL POSITION, RUDDER TRIM & FORCE

DIGITAL INTERFACES

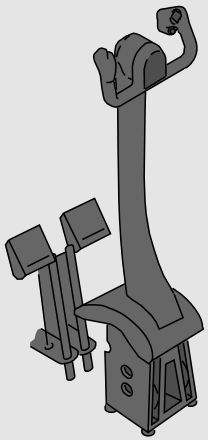
ACTUATOR CONTROL ELECTRONICS (4)

28V DC POWER

±13.5V DC POWER

ADMs, GUST SUPPRESSION TRANSDUCERS

POWER CONDITIONING MODULE (PCM) (4)



WHEEL & COLUMN POSITION, RUDDER PEDAL & TRIM

I / O MODULE

BACKDRIVE CONTROL

PFC CONTROL

A/P PITCH, ROLL, & YAW CALCULATION

FLAP/SLAT POSITION

PRIMARY FLIGHT CONTROL CALCULATIONS

AUTOPILOT CONTROL LAWS

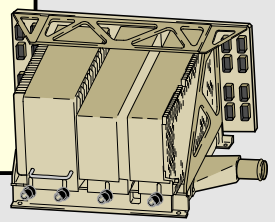
PRIMARY FLIGHT CONTROL FUNCTION (PFCF)

AUTOFLIGHT FUNCTION (AFF)

HIGH LIFT FUNCTION (HLF)

FLIGHT CONTROL MODULE (3)

TO COMMON DATA NETWORK



FLIGHT CONTROL ELECTRONICS CABINET (4)

PFCF - Intro (27-02)

787_0187_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

PRIMARY FLIGHT CONTROL FUNCTION - FCE (27-02)

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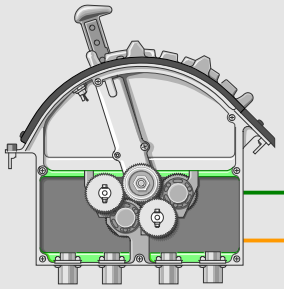


FLAP LEVER

SECONDARY FLAP/SLAT CTRL

PRIMARY FLAP/SLAT CTRL

ALTERNATE FLAP/SLAT CTRL

POWER CONTROL MODULE

235V AC

L - ACE

C1 - ACE

C2 - ACE

R - ACE

FLIGHT CONTROL MODULES (3)

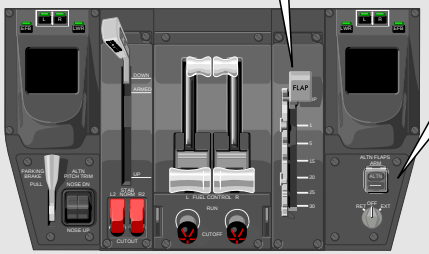
SECONDARY

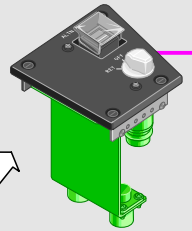
ALTERNATE

SECONDARY

PRIMARY

SLAT & FLAP ELECTRIC MOTOR CONTROL UNITS

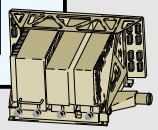


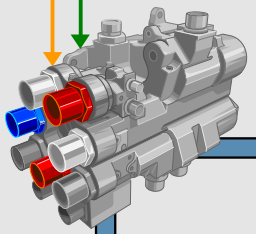


ALTERNATE SWITCH

POSITION INDICATION

FLIGHT CONTROL ELECTRONICS (4)

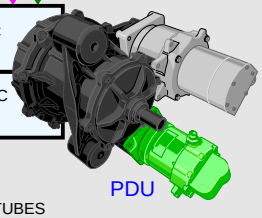




HYDRAULIC CONTROL MODULE

ELECTRIC MOTOR

HYDRAULIC MOTOR

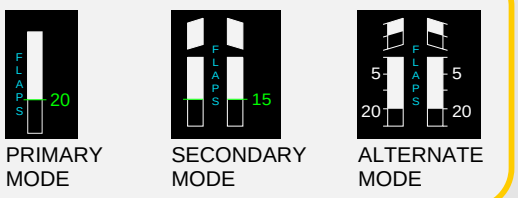


PDU

TORQUE TUBES

ACTUATORS

CENTER HYDRAULIC



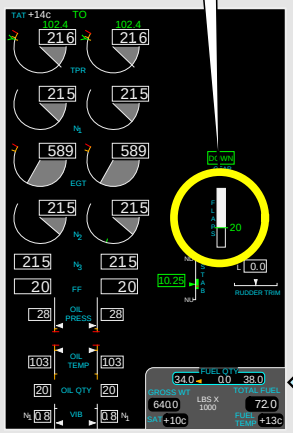
PRIMARY MODE

SECONDARY MODE

ALTERNATE MODE

SPOILER REUs & EMCUs

SKEW SENSORS, POSITION SENSORS



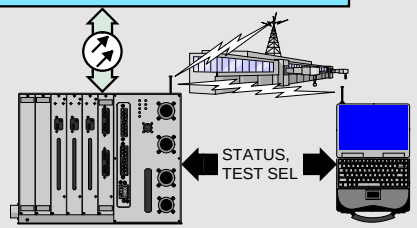
HEAD-DOWN DISPLAY

COMMON DATA NETWORK

- DISPLAYS & CREW ALERTING
- HYDIF

GG GG FOX ACS FOX ACS PCM

COMMON COMPUTING RESOURCE CABINET (2)



CORE NETWORK

STATUS, TEST SEL

MAINTENANCE LAPTOP

787_0153_0001_V6

Flt Ctrls (27-00)

HIGH LIFT FUNCTION (27-03)

Applicable To: DM Applicability (See Title Page)

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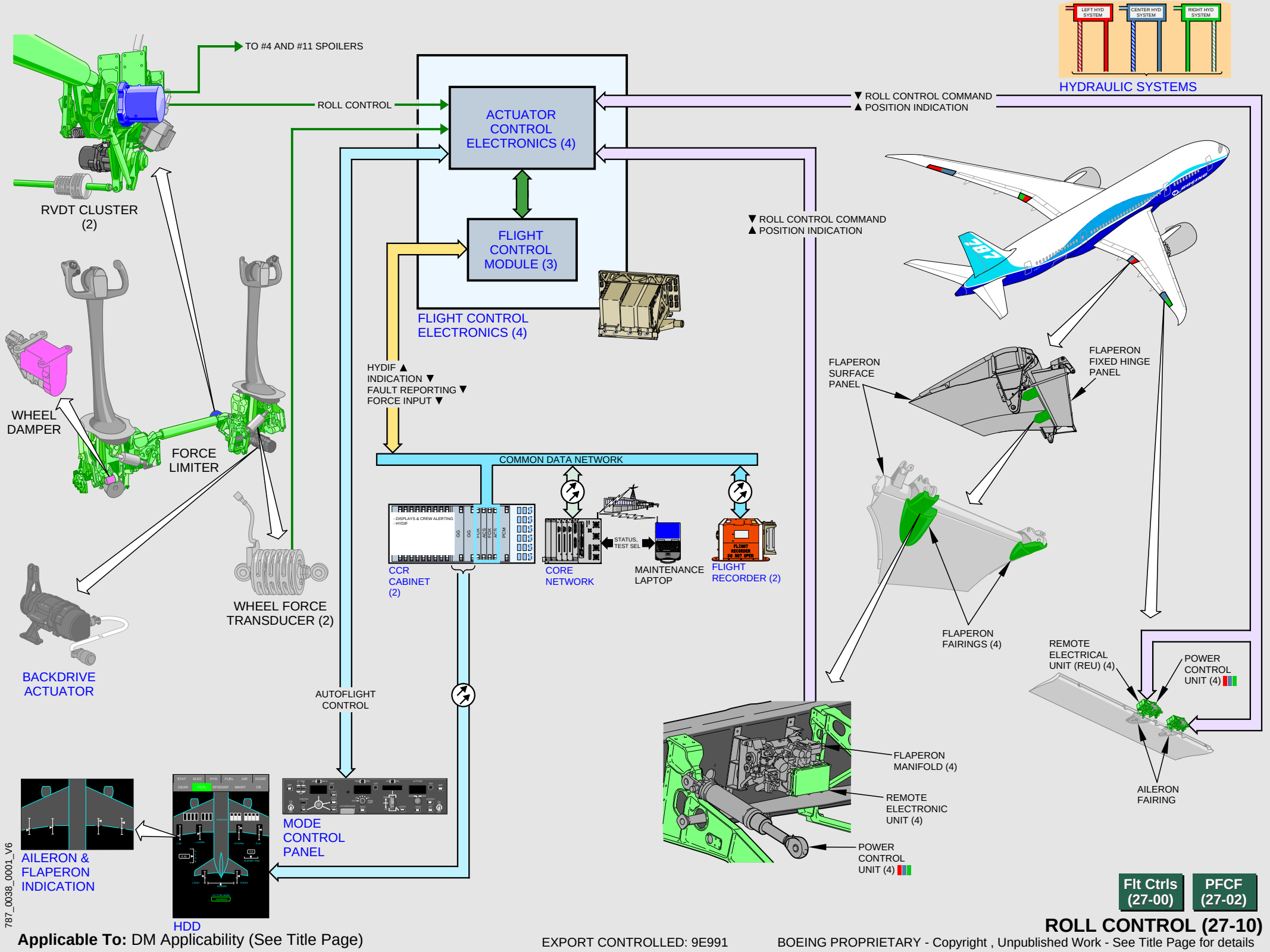

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Flt Ctrls (27-00) PFCF (27-02)

ROLL CONTROL (27-10)

Applicable To: DM Applicability (See Title Page)

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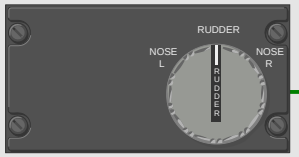


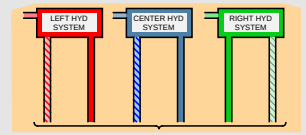
RUDDER TRIM MODULE

RUDDER TRIM INPUT

ACTUATOR CONTROL ELECTRONICS (4)

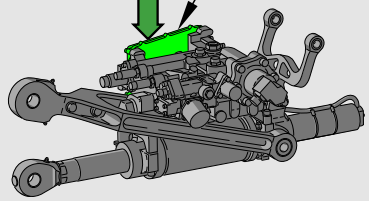
SUPRESSION TRANSDUCER FEEDBACK

YAW CONTROL COMMAND ▶
◀ POSITION INDICATION



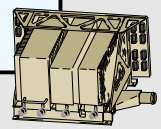
HYDRAULIC SYSTEMS

REMOTE ELECTRONICS UNIT (3)



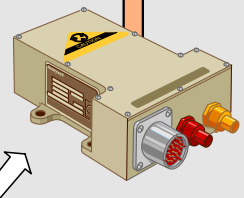
POWER CONTROL UNIT (3)

FLIGHT CONTROL MODULE (3)

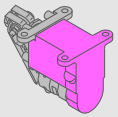


FLIGHT CONTROL ELECTRONICS (4)

SUPRESSION TRANSDUCER FEEDBACK



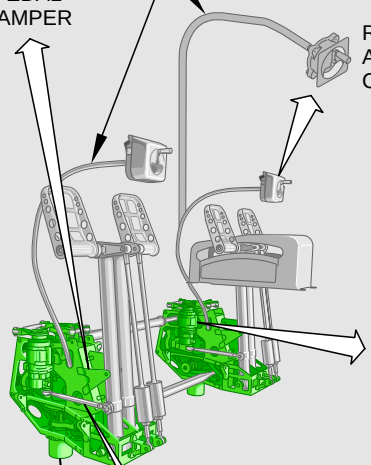
GUST SUPPRESSION PRESSURE TRANSDUCER (2)

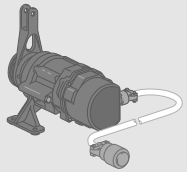


PEDAL DAMPER

RUDDER PEDAL ADJUSTMENT FLEX SHAFT (L, R)

RUDDER PEDAL ADJUSTMENT CRANK (L, R)



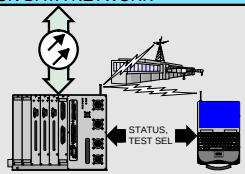


BACKDRIVE ACTUATOR

HYDIF INDICATION, FAULT REPORTING, FORCE INPUT

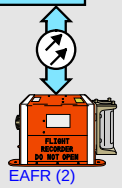
COMMON DATA NETWORK

CCR CABINET (2)

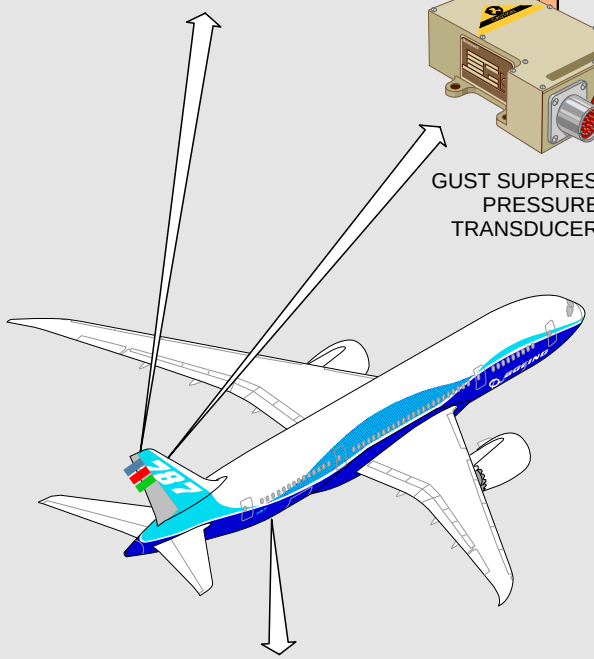


CORE NETWORK

MAINTENANCE LAPTOP



EAFR (2)



YAW, TRIM & FORCE INPUT

AUTOFLIGHT CONTROL

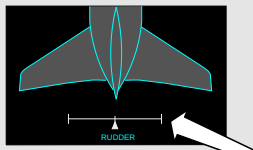
RVDT CLUSTER (2)

TRIM ACTUATOR

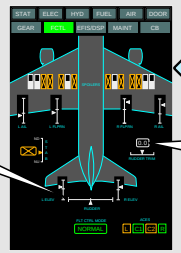
TRIM POS TRANSDUCER

FORCE TRANSDUCER (2)

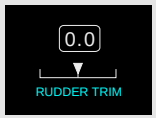
MODE CONTROL PANEL



RUDDER INDICATION

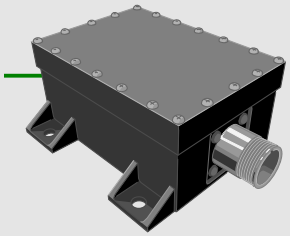


HDD



RUDDER TRIM INDICATION

ACCELEROMETER FEEDBACK



MODAL ACCELEROMETER (2)

IFCS (27-00)

PFCF (27-02)

787_0039_0001_V5

RUDDER (787-8) (27-20)

Applicable To: DM Applicability (See Title Page)

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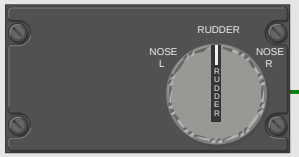


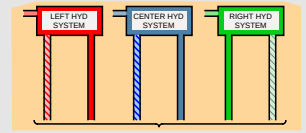
RUDDER TRIM MODULE

RUDDER TRIM INPUT

ACTUATOR CONTROL ELECTRONICS (4)

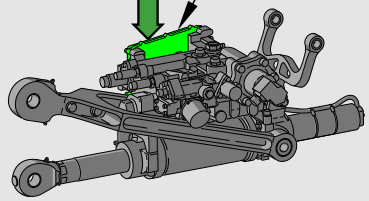
SUPRESSION TRANSDUCER FEEDBACK

YAW CONTROL COMMAND ▶
◀ POSITION INDICATION



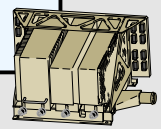
HYDRAULIC SYSTEMS

REMOTE ELECTRONICS UNIT (3)



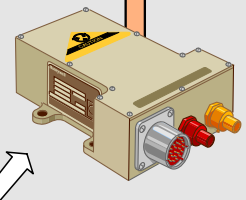
POWER CONTROL UNIT (3)

FLIGHT CONTROL MODULE (3)

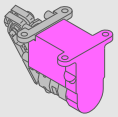


FLIGHT CONTROL ELECTRONICS (4)

SUPRESSION TRANSDUCER FEEDBACK



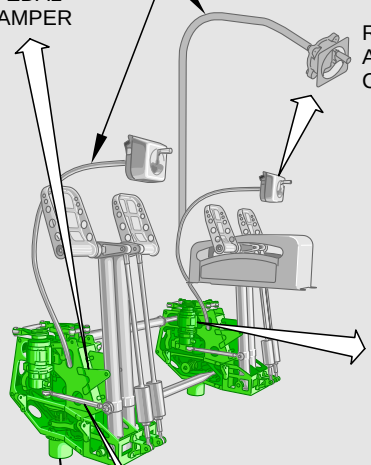
GUST SUPPRESSION PRESSURE TRANSDUCER (2)

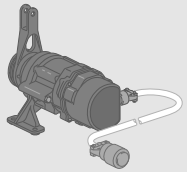


PEDAL DAMPER

RUDDER PEDAL ADJUSTMENT FLEX SHAFT (L, R)

RUDDER PEDAL ADJUSTMENT CRANK (L, R)



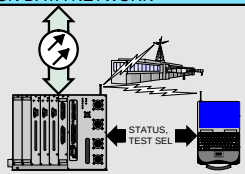


BACKDRIVE ACTUATOR

HYDIF
INDICATION, FAULT REPORTING, FORCE INPUT

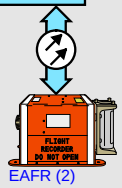
COMMON DATA NETWORK

CCR CABINET (2)

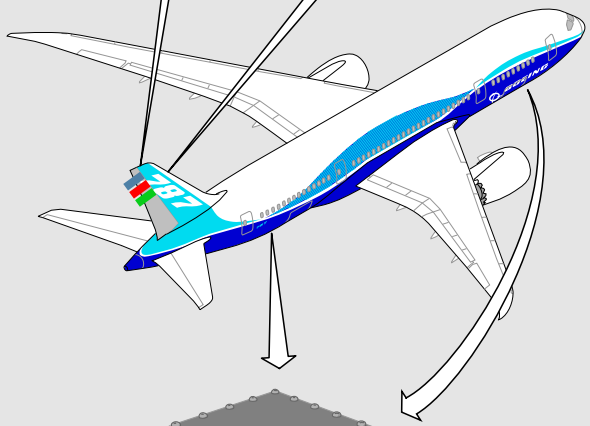


CORE NETWORK

MAINTENANCE LAPTOP



EAFR (2)



YAW, TRIM & FORCE INPUT

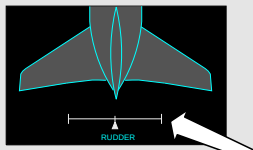
AUTOFLIGHT CONTROL

RVDT CLUSTER (2)

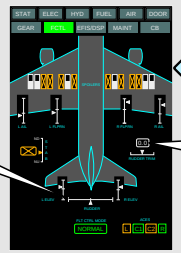
TRIM ACTUATOR
TRIM POS TRANSDUCER

FORCE TRANSDUCER (2)

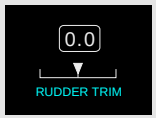
MODE CONTROL PANEL



RUDDER INDICATION

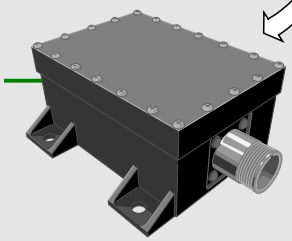


HDD



RUDDER TRIM INDICATION

ACCELEROMETER FEEDBACK



MODAL ACCELEROMETER (4)

IFCS (27-00)

PFCF (27-02)

787_0039_0002_V5

RUDDER (787-9) (27-20)

Applicable To: DM Applicability (See Title Page)

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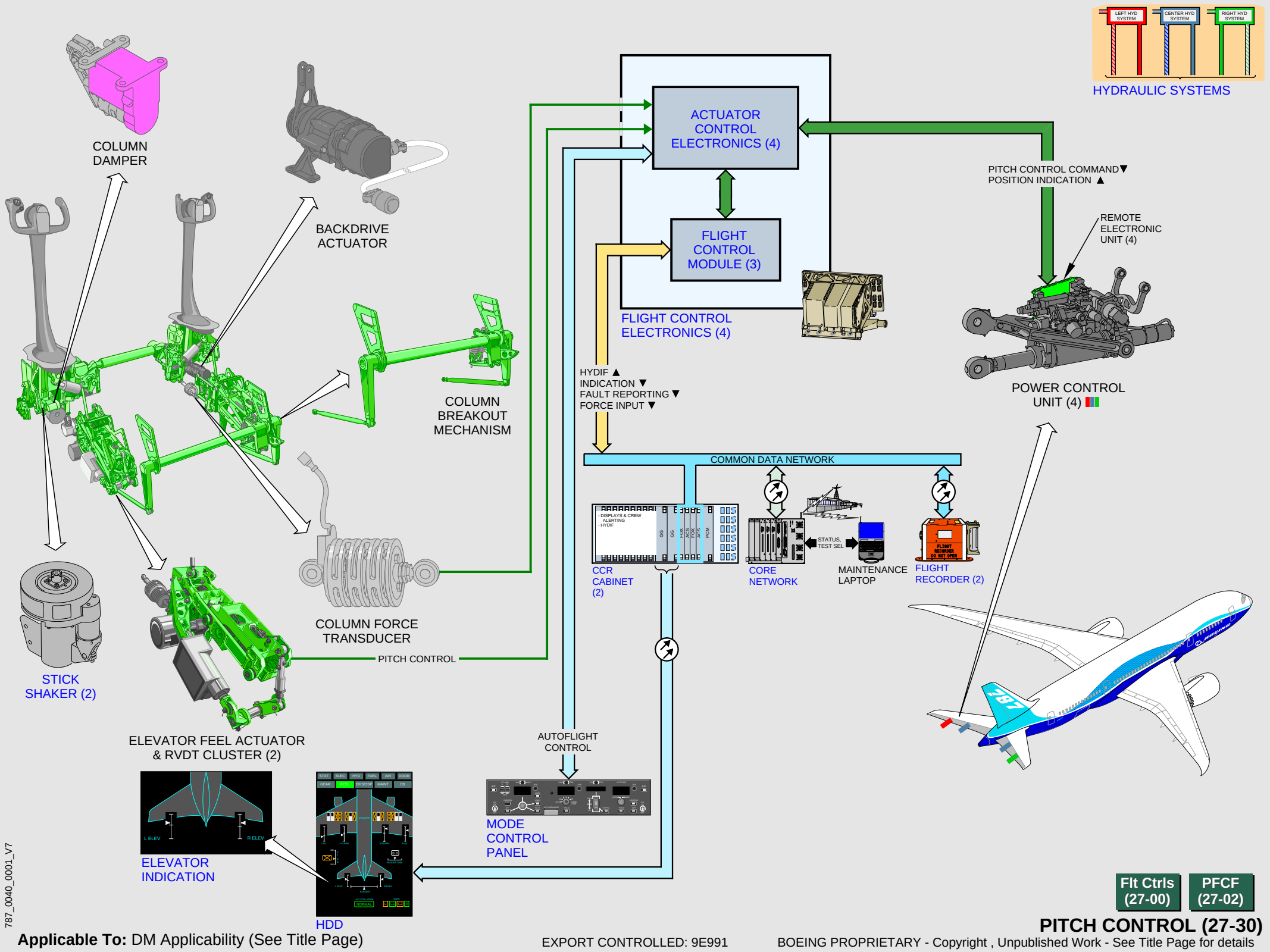

787_0040_0001_V7

Applicable To: DM Applicability (See Title Page)

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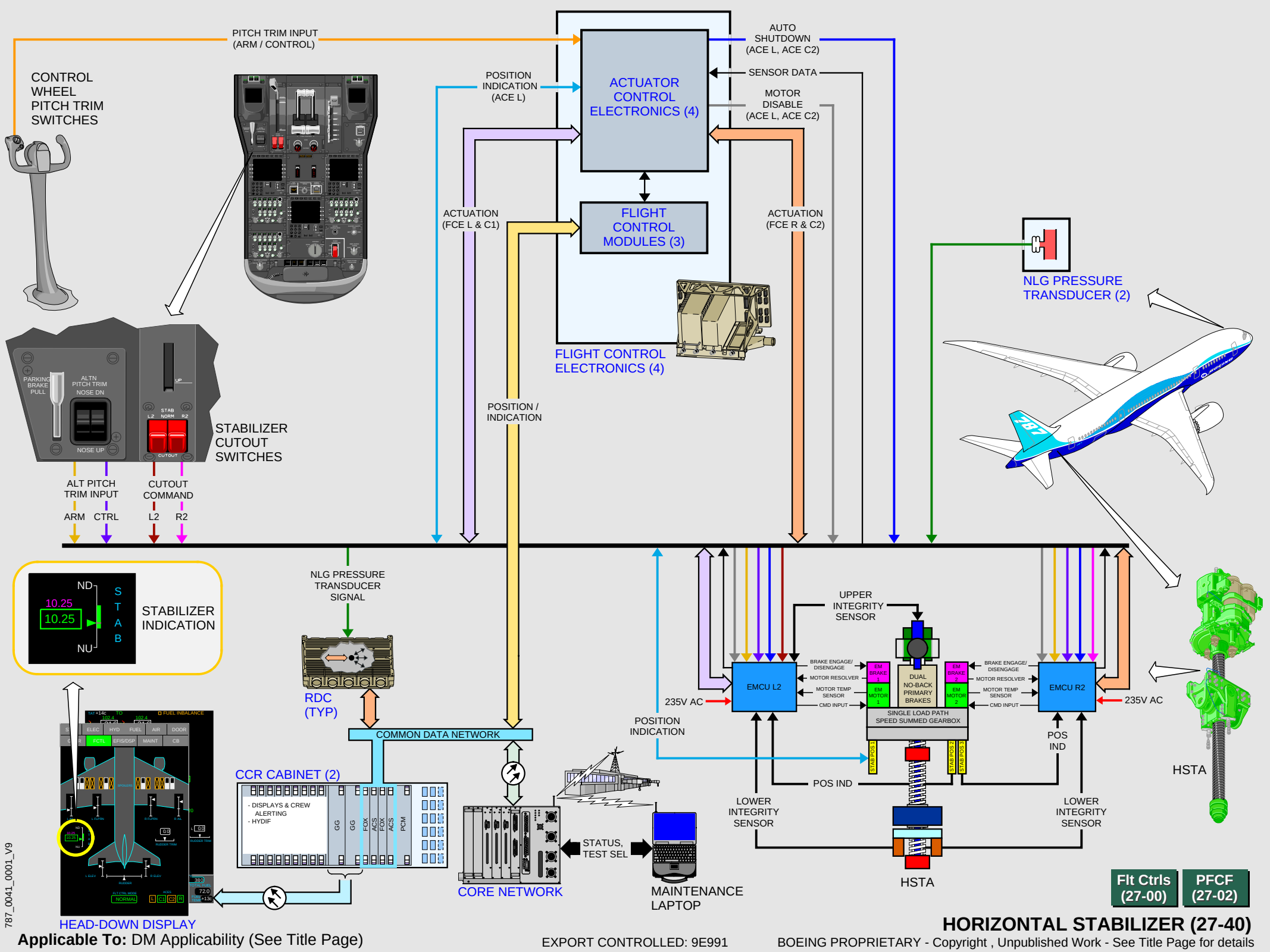
Flt Ctrls (27-00) | PFCF (27-02)

PITCH CONTROL (27-30)



787_0041_0001_V9

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

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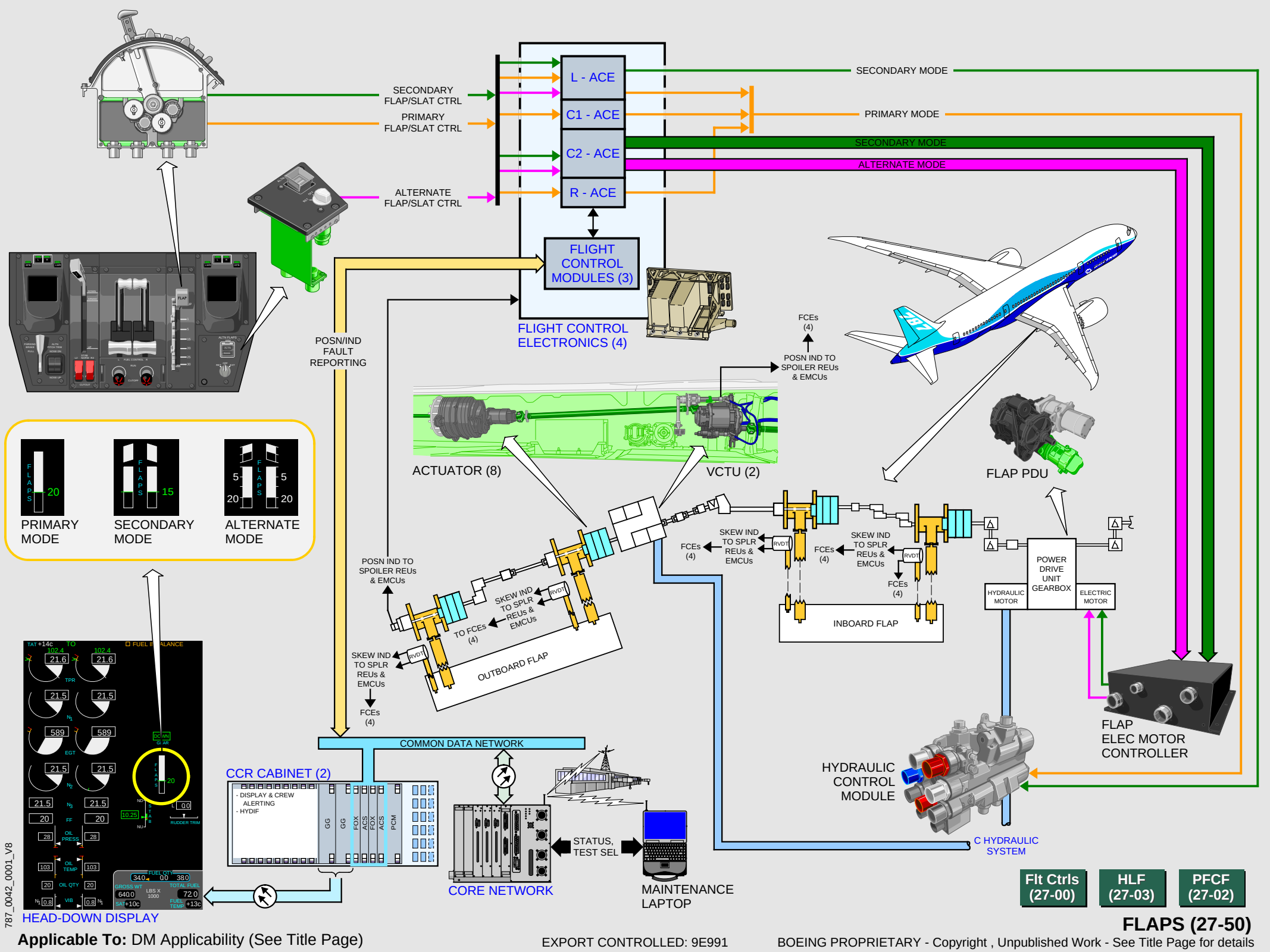
Flt Ctrls (27-00) | PFCF (27-02)

HORIZONTAL STABILIZER (27-40)



Flt Ctrls (27-00) | HLF (27-03) | PFCF (27-02)

FLAPS (27-50)

787_0042_0001_V8

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

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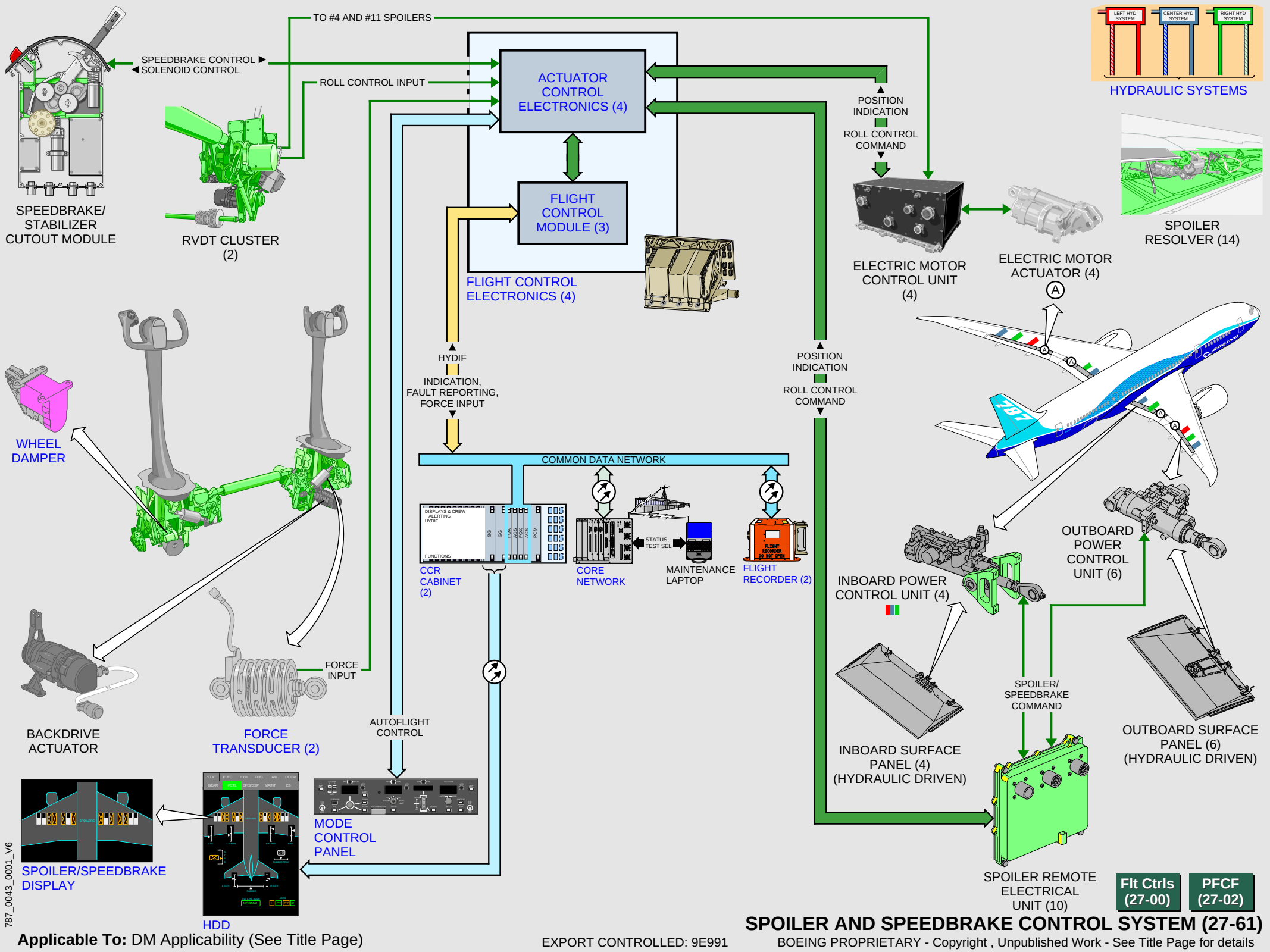

787_0043_0001_V6

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

SPOILER AND SPEEDBRAKE CONTROL SYSTEM (27-61)

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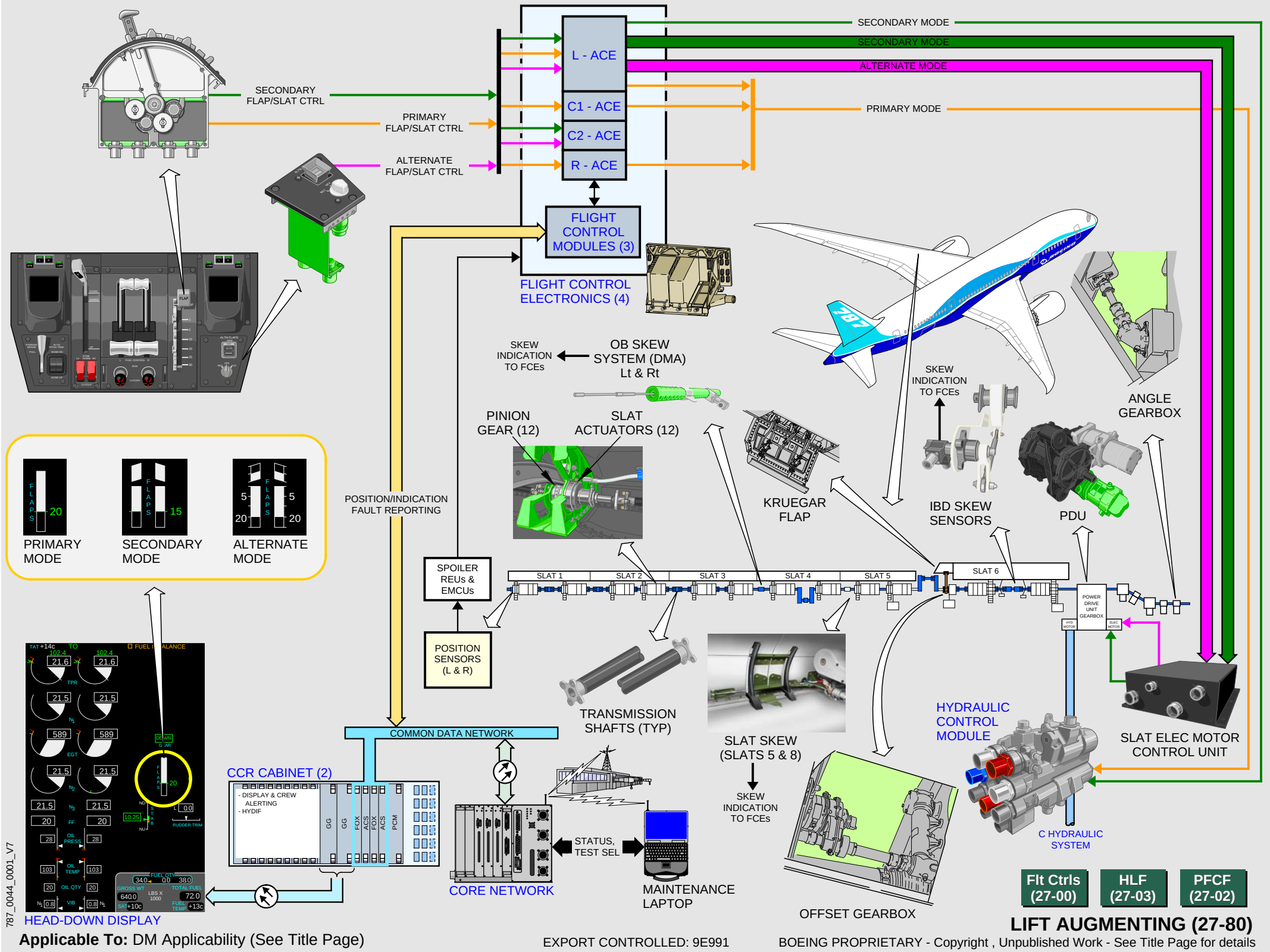

Flt Ctrls (27-00) | HLF (27-03) | PFCF (27-02)

LIFT AUGMENTING (27-80)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

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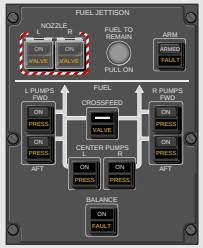
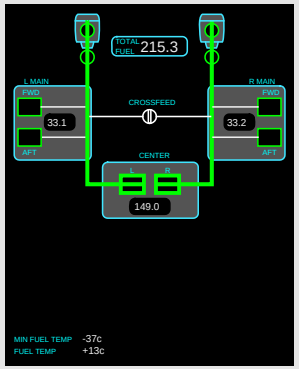
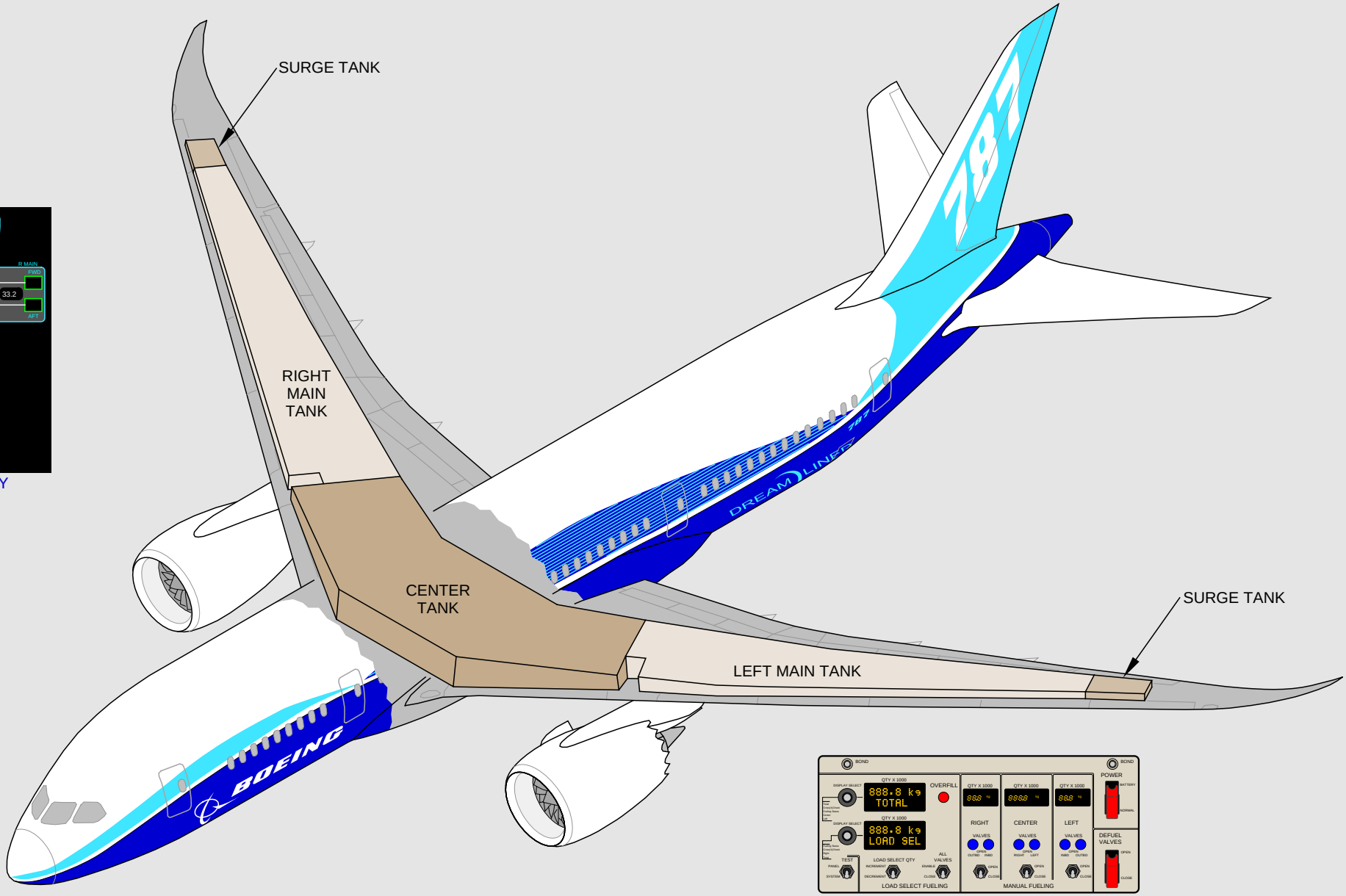
787_0044_0001_V7



FUEL CONTROL PANEL



HEAD-DOWN DISPLAY



REFUEL CONTROL PANEL

Fuel Storage (28-11) | Fuel Vent System (28-13) | Pressure Refueling (28-21) | Engine Fuel Feed (28-22) | APU Fuel Feed (28-25) | Defueling (28-26) | Fuel Jettison (28-31) | Fuel Qty Indicating (28-41) | Fuel Press Indicating (28-42)

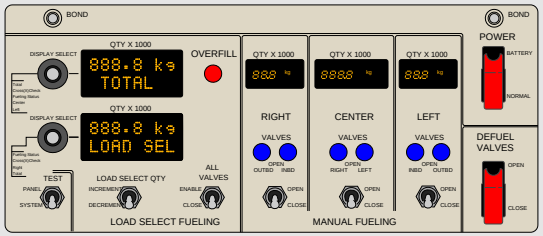
787_0138_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

FUEL SYSTEM (28-00)



REFUEL CONTROL PANEL

CENTER TANK PURGE HOLE COVER

WING DRY BAY FLAME ARRESTOR (2)

WING DRY BAY ACCESS PANEL

BAFFLE RIB CHECK VALVES (TYP)

TANK ACCESS DOOR (TYP)

SPAN WISE BEAMS

CENTER TANK ACCESS PANEL (TYP)

NGS IN

MAIN TANK ACCESS PANEL (TYP)

FUEL VENT DRAIN VALVE (TYP)

FUEL VENT FLOAT VALVE

CENTER TANK

FUEL VENT CROSSFLOW CHECK VALVE (2)

SUMP DRAIN (TYP)

CENTER TANK ACCESS PANEL (REAR SPAR)

LEFT MAIN TANK

RIGHT MAIN TANK

RIB 11

RIB 9

RIB 9

RIB 11

RIB 21

RIB 32

RIB 21

RIB 32

SURGE TANK

SURGE TANK

SURGE TANK DRAIN CHECK VALVE (TYP)

SURGE TANK PRESSURE RELIEF VALVE

FLAME ARREST

VENT SCOOP

Fuel System (28-00)

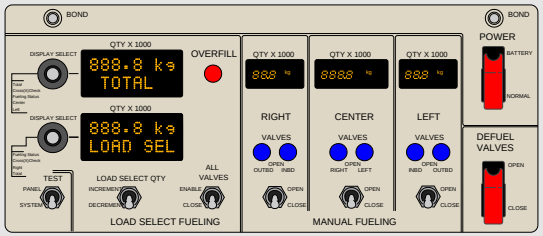
787_0045_0001_V7

FUEL TANKS/FUEL VENT (747-8) (28-11/13)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



REFUEL CONTROL PANEL

CENTER TANK PURGE HOLE COVER

WING DRY BAY FLAME ARRESTOR (2)

WING DRY BAY ACCESS PANEL

BAFFLE RIB CHECK VALVES (TYP)

TANK ACCESS DOOR (TYP)

SPAN WISE BEAMS

CENTER TANK ACCESS PANEL (TYP)

NGS IN

MAIN TANK ACCESS PANEL (TYP)

FUEL VENT DRAIN VALVE (TYP)

FUEL VENT FLOAT VALVE

CENTER TANK

SUMP DRAIN (TYP)

CENTER TANK ACCESS PANEL (REAR SPAR)

LEFT MAIN TANK

RIGHT MAIN TANK

FUEL VENT CROSSFLOW CHECK VALVE (2)

RIB 11

RIB 9

RIB 9

RIB 11

RIB 21

RIB 21

RIB 32

RIB 32

SURGE TANK

SURGE TANK

SURGE TANK DRAIN CHECK VALVE (TYP)

SURGE TANK PRESSURE RELIEF VALVE

FLAME ARREST

VENT SCOOP

Fuel System (28-00)

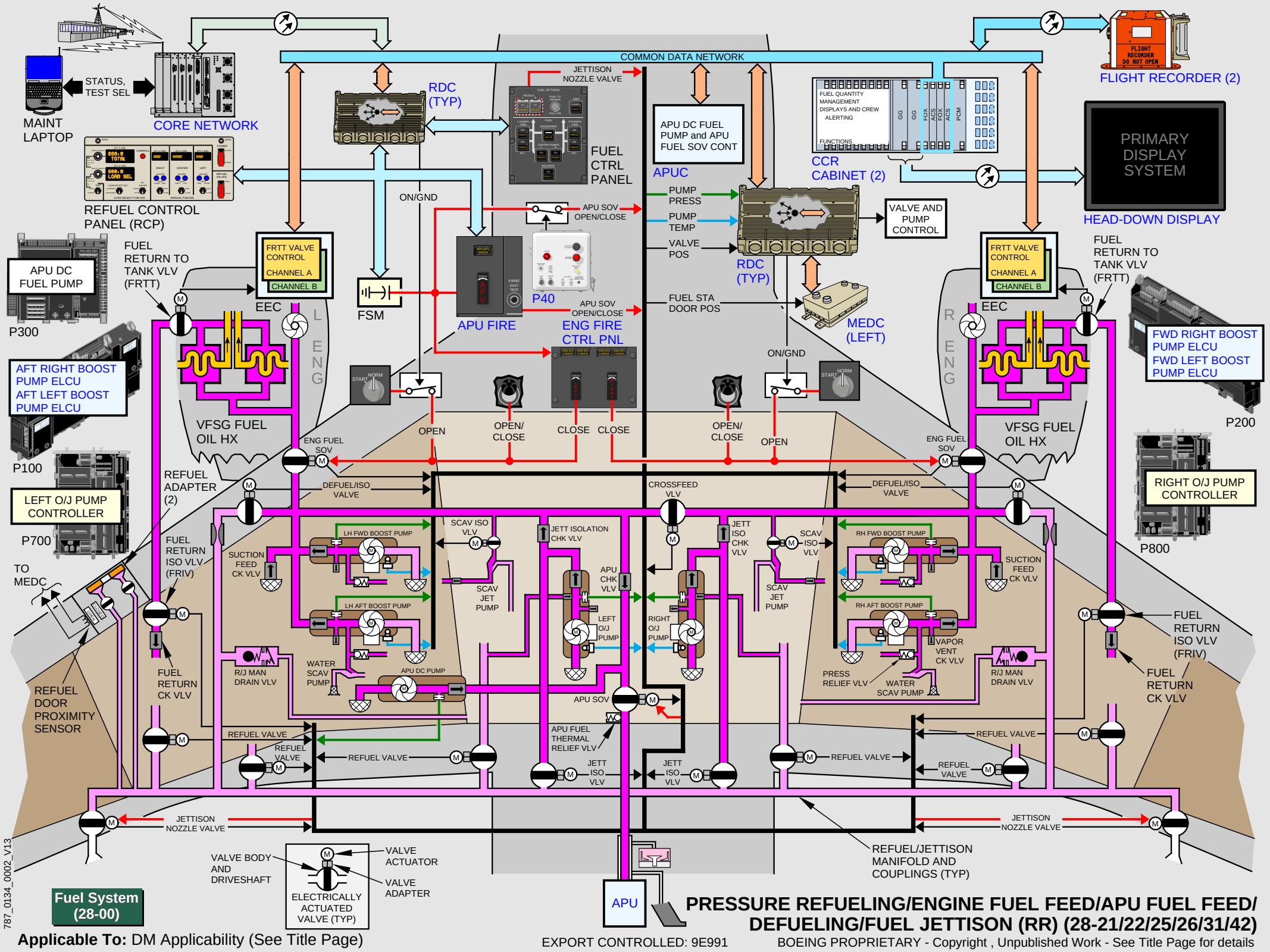
787_0045_0002_V1

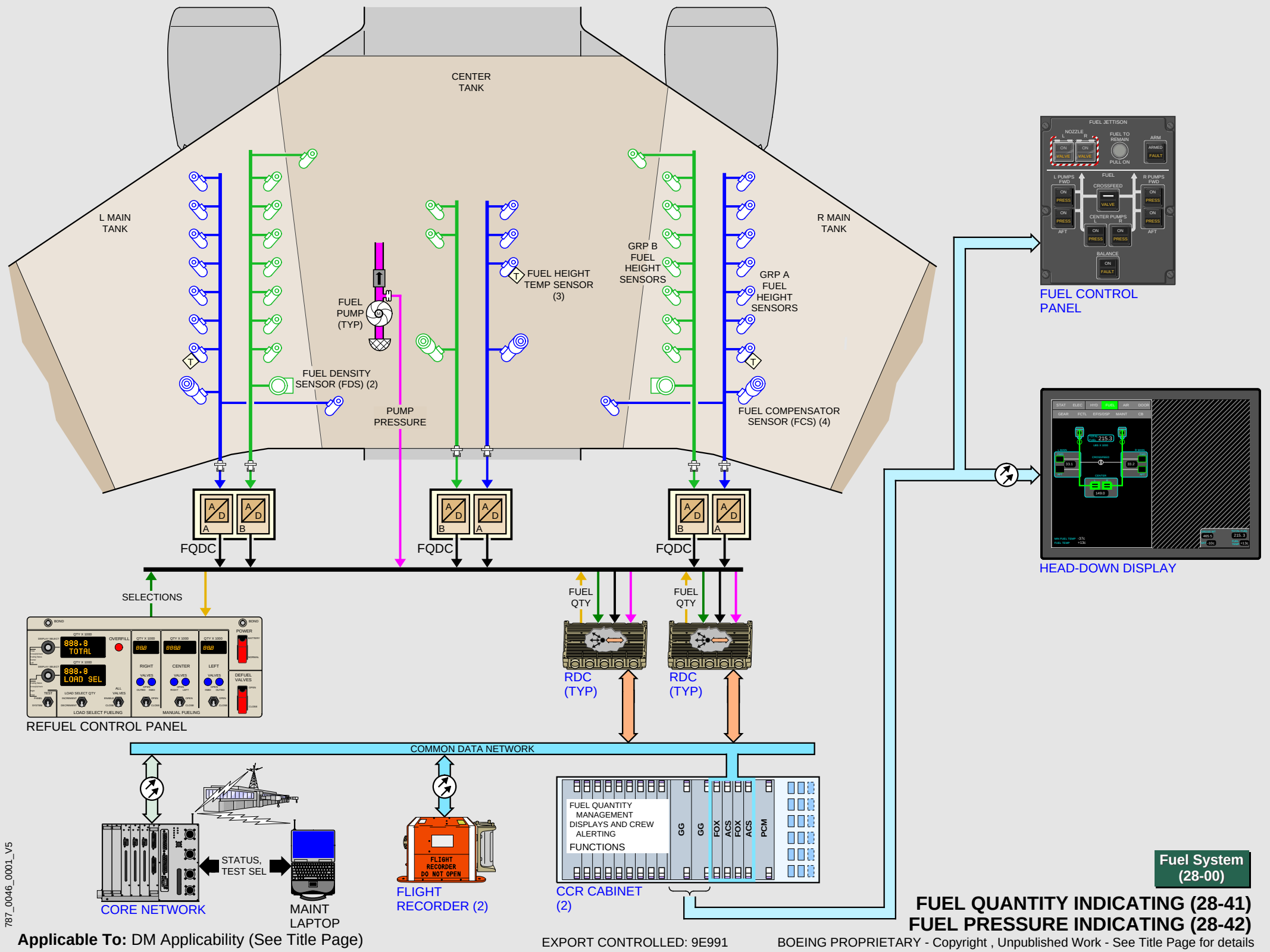
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

FUEL TANKS/FUEL VENT (787-9) (28-11/13)


COMMON DATA NETWORK
MAINT LAPTOP
STATUS, TEST SEL
CORE NETWORK
RDC (TYP)
JETTISON NOZZLE VALVE
FUEL CTRL PANEL
APU DC FUEL PUMP and APU FUEL SOV CONT
APUC
FUEL QUANTITY MANAGEMENT DISPLAYS AND CREW ALERTING FUNCTIONS
CCR CABINET (2)
FLIGHT RECORDER (2)
PRIMARY DISPLAY SYSTEM
HEAD-DOWN DISPLAY
REFUEL CONTROL PANEL (RCP)
ON/GND
APU SOV OPEN/CLOSE
PUMP PRESS
PUMP TEMP
VALVE POS
VALVE AND PUMP CONTROL
APU DC FUEL PUMP
P300
FUEL RETURN TO TANK VLV (FRTT)
FRTT VALVE CONTROL
CHANNEL A
CHANNEL B
EEC
FSM
APU FIRE
P40
ENG FIRE CTRL PNL
FUEL STA DOOR POS
MEDC (LEFT)
L ENG
R ENG
AFT RIGHT BOOST PUMP ELCU
AFT LEFT BOOST PUMP ELCU
P100
FWD RIGHT BOOST PUMP ELCU
FWD LEFT BOOST PUMP ELCU
P200
VFSG FUEL OIL HX
ENG FUEL SOV
OPEN
OPEN/ CLOSE
CLOSE
REFUEL ADAPTER (2)
DEFUEL/ISO VALVE
CROSSFEED VLV
LEFT O/J PUMP CONTROLLER
P700
RIGHT O/J PUMP CONTROLLER
P800
TO MEDC
FUEL RETURN ISO VLV (FRIV)
SUCTION FEED CK VLV
LH FWD BOOST PUMP
LH AFT BOOST PUMP
SCAV ISO VLV
SCAV JET PUMP
JETT ISOLATION CHK VLV
APU CHK VLV
LEFT O/J PUMP
RIGHT O/J PUMP
JETT ISO CHK VLV
RH FWD BOOST PUMP
RH AFT BOOST PUMP
VAPOR VENT CK VLV
PRESS RELIEF VLV
WATER SCAV PUMP
R/J MAN DRAIN VLV
APU DC PUMP
FUEL RETURN CK VLV
REFUEL DOOR PROXIMITY SENSOR
REFUEL VALVE
APU SOV
APU FUEL THERMAL RELIEF VLV
JETT ISO VLV
JETTISON NOZZLE VALVE
VALVE BODY AND DRIVESHAFT
VALVE ACTUATOR
VALVE ADAPTER
ELECTRICALLY ACTUATED VALVE (TYP)
APU
REFUEL/JETTISON MANIFOLD AND COUPLINGS (TYP)
Fuel System (28-00)
787_0134_0002_V13
PRESSURE REFUELING/ENGINE FUEL FEED/APU FUEL FEED/ DEFUELING/FUEL JETTISON (RR) (28-21/22/25/26/31/42)
Applicable To: DM Applicability (See Title Page)
EXPORT CONTROLLED: 9E991
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0046_0001_V5

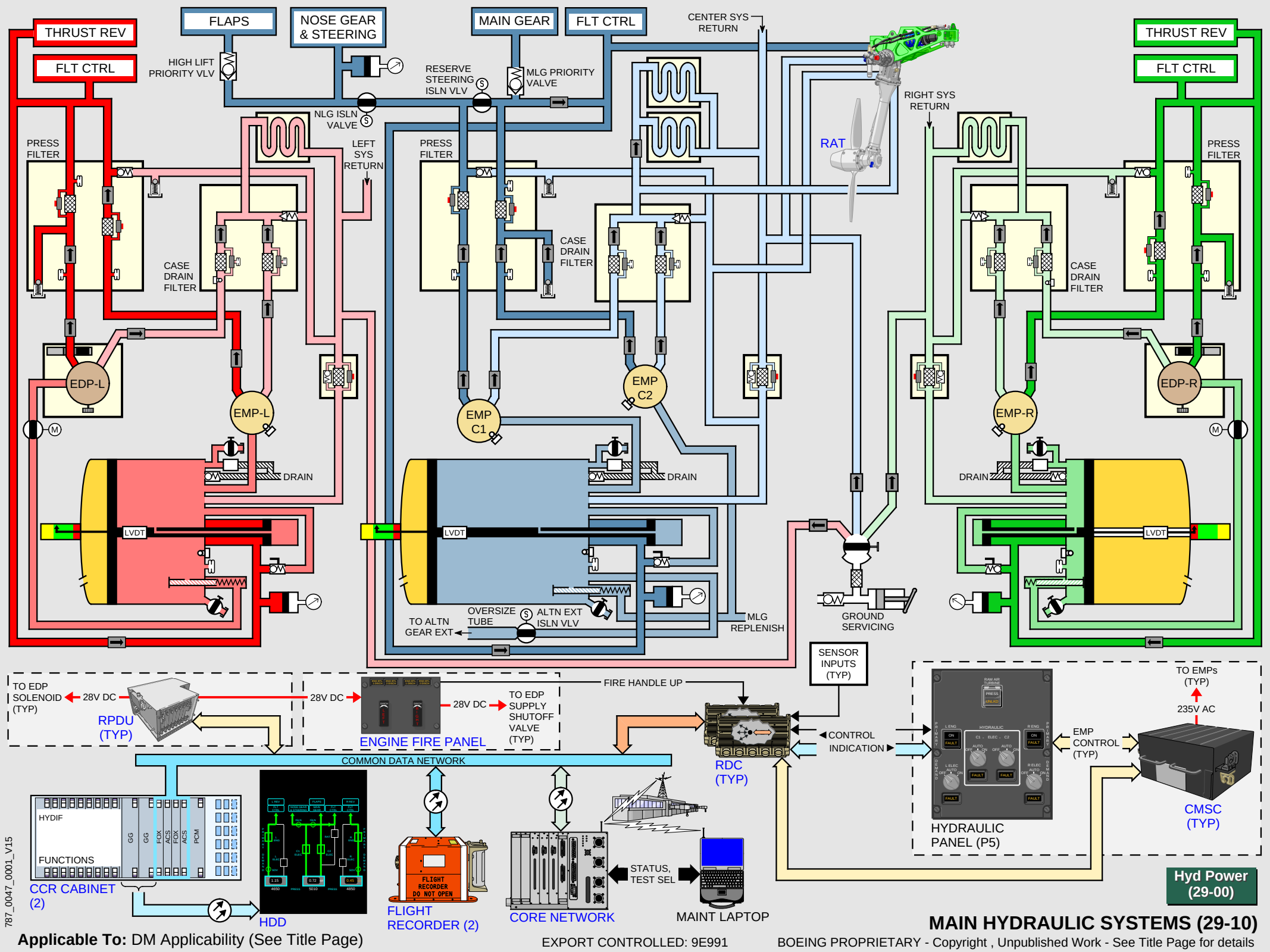
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

Fuel System (28-00)

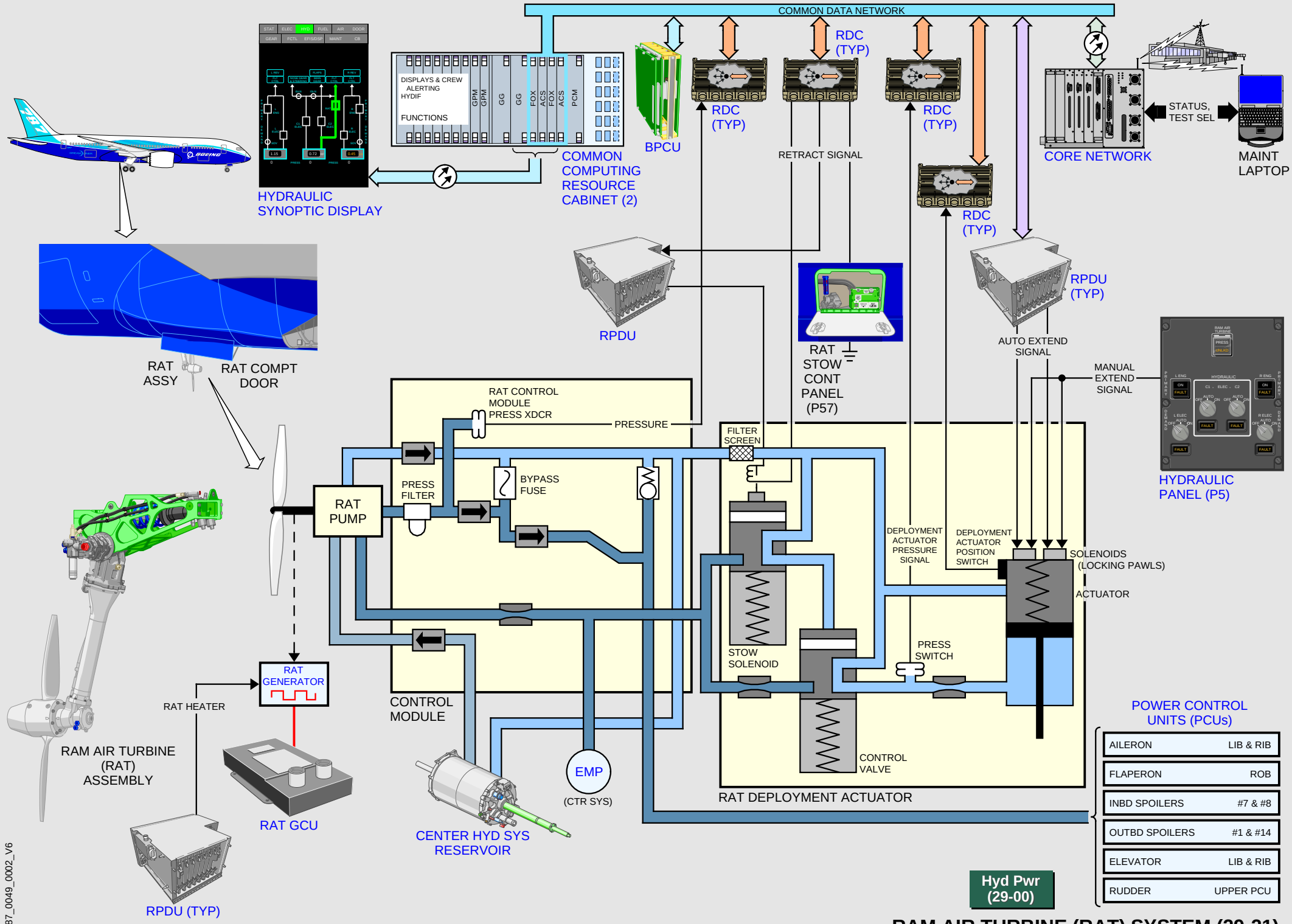
FUEL QUANTITY INDICATING (28-41)
FUEL PRESSURE INDICATING (28-42)



Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

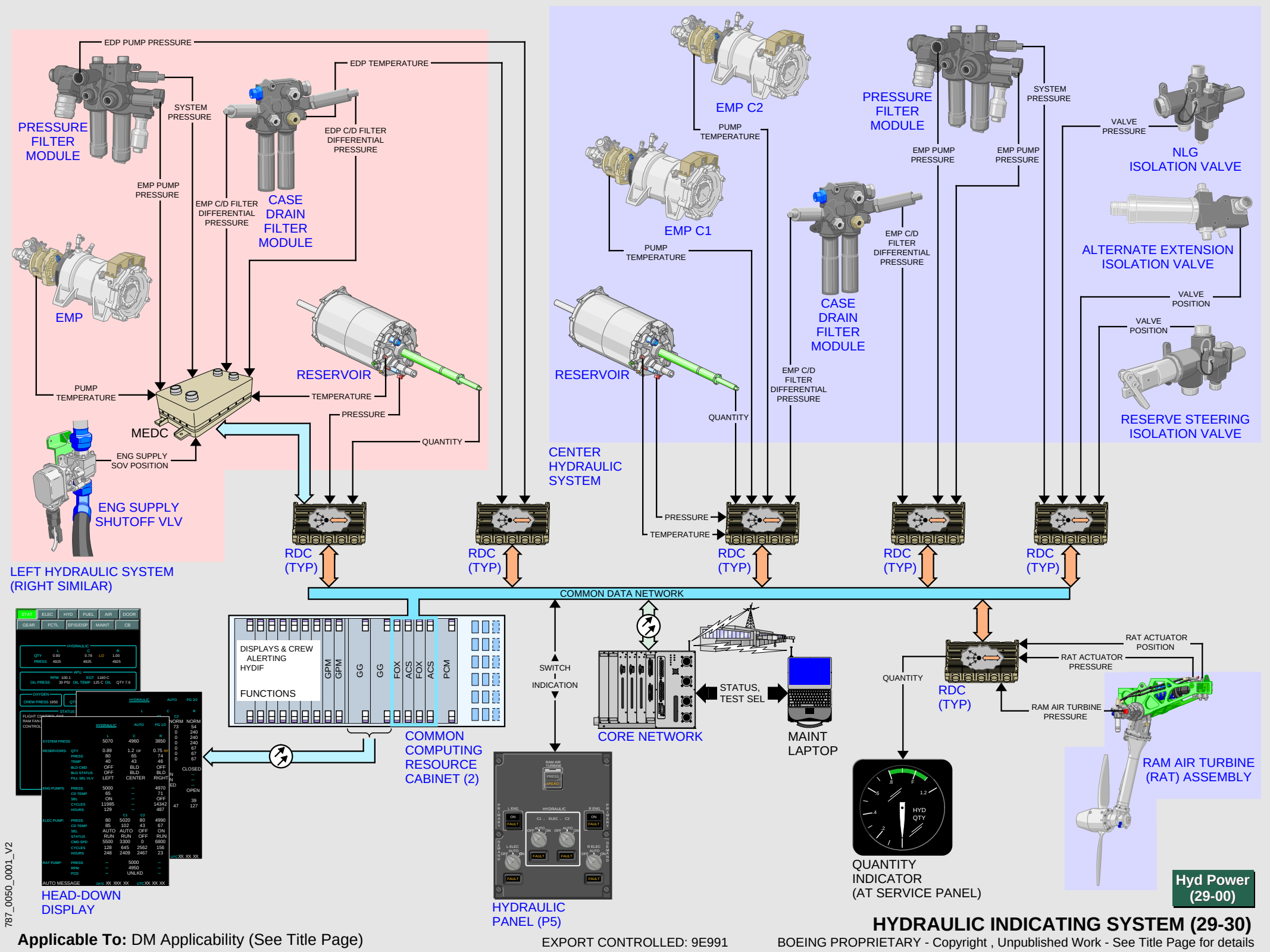


RAM AIR TURBINE (RAT) SYSTEM (29-21)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0050_0001_V2

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

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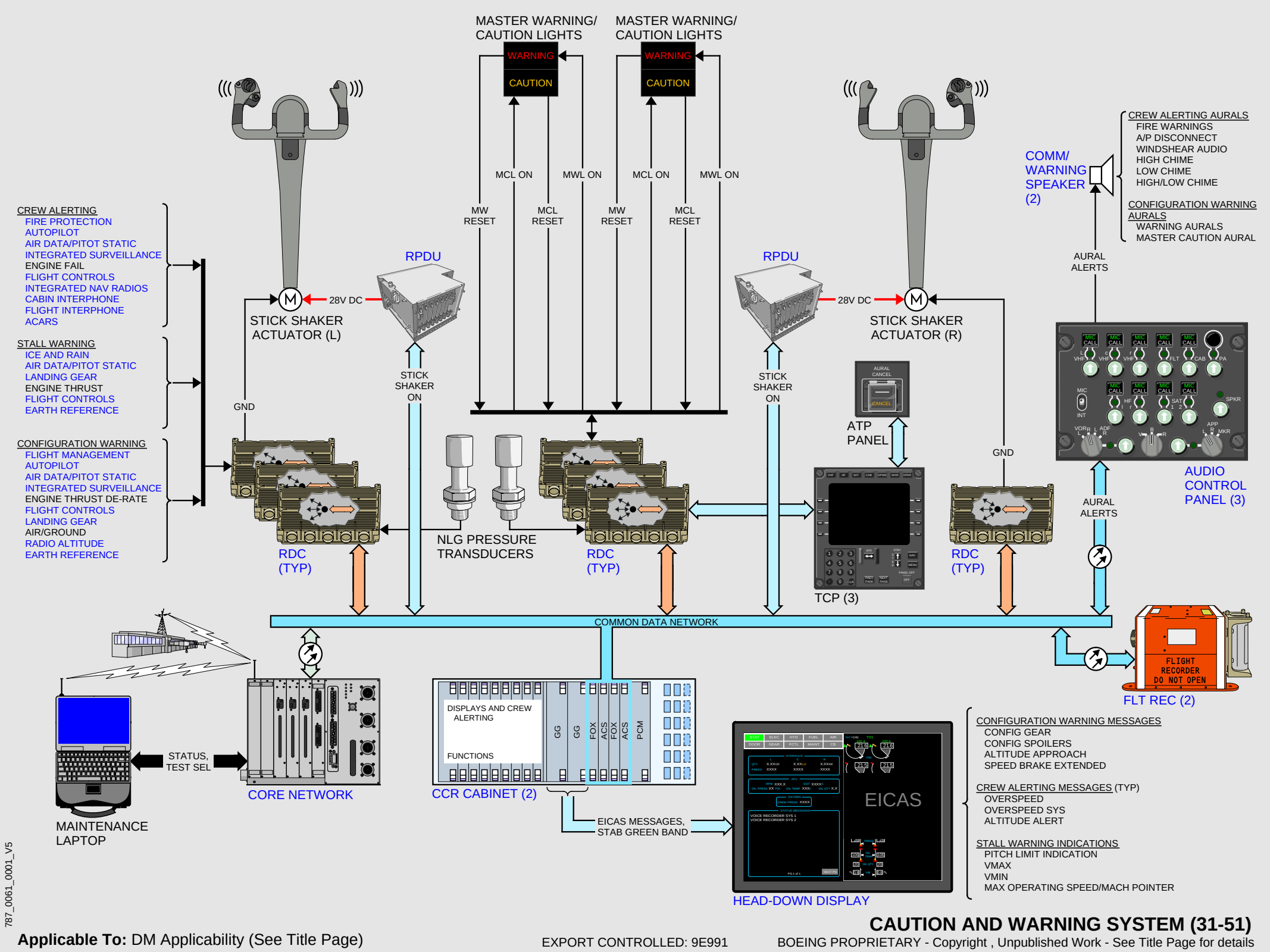
Hyd Power (29-00)

HYDRAULIC INDICATING SYSTEM (29-30)



787_0061_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

CAUTION AND WARNING SYSTEM (31-51)

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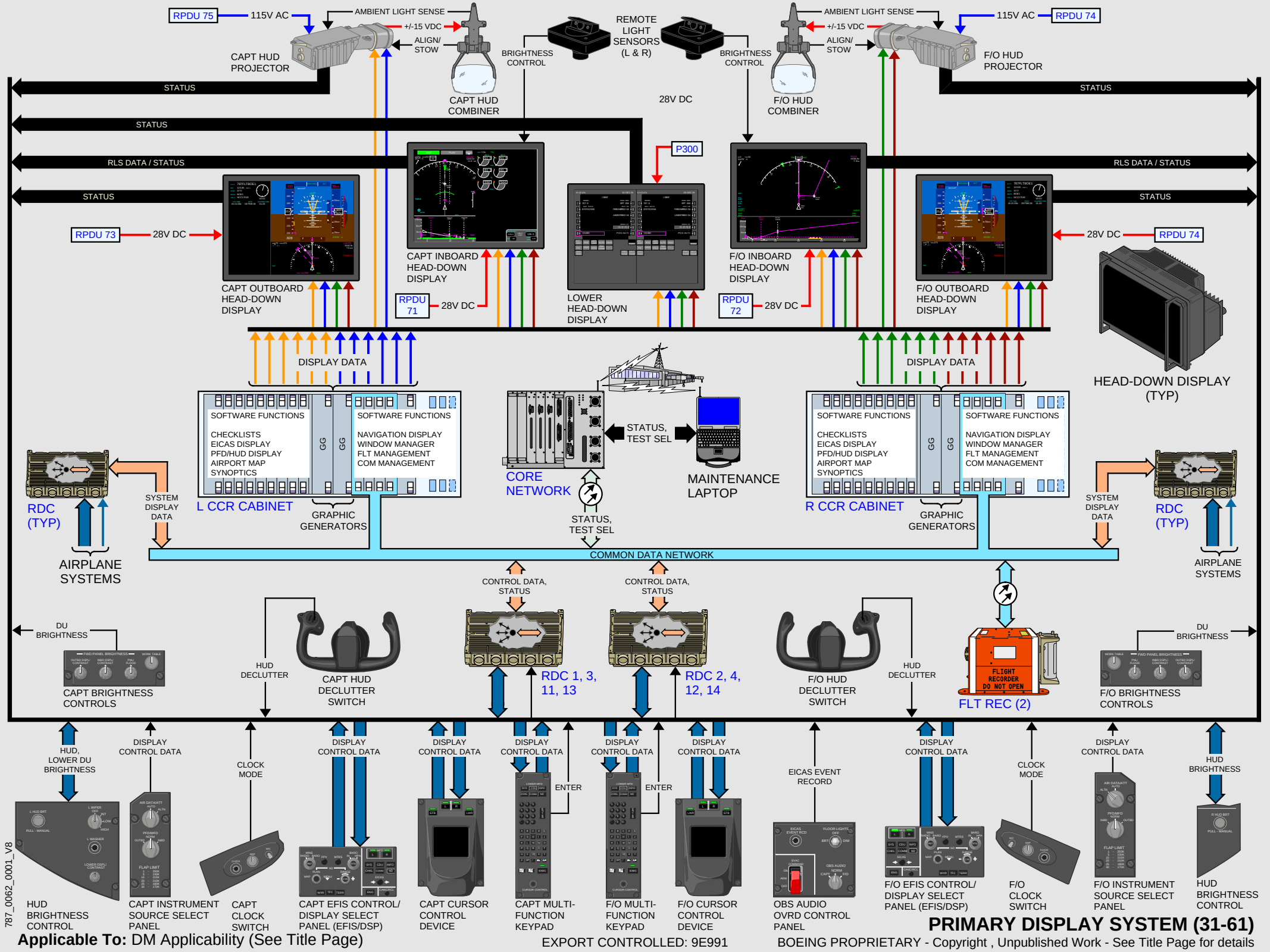


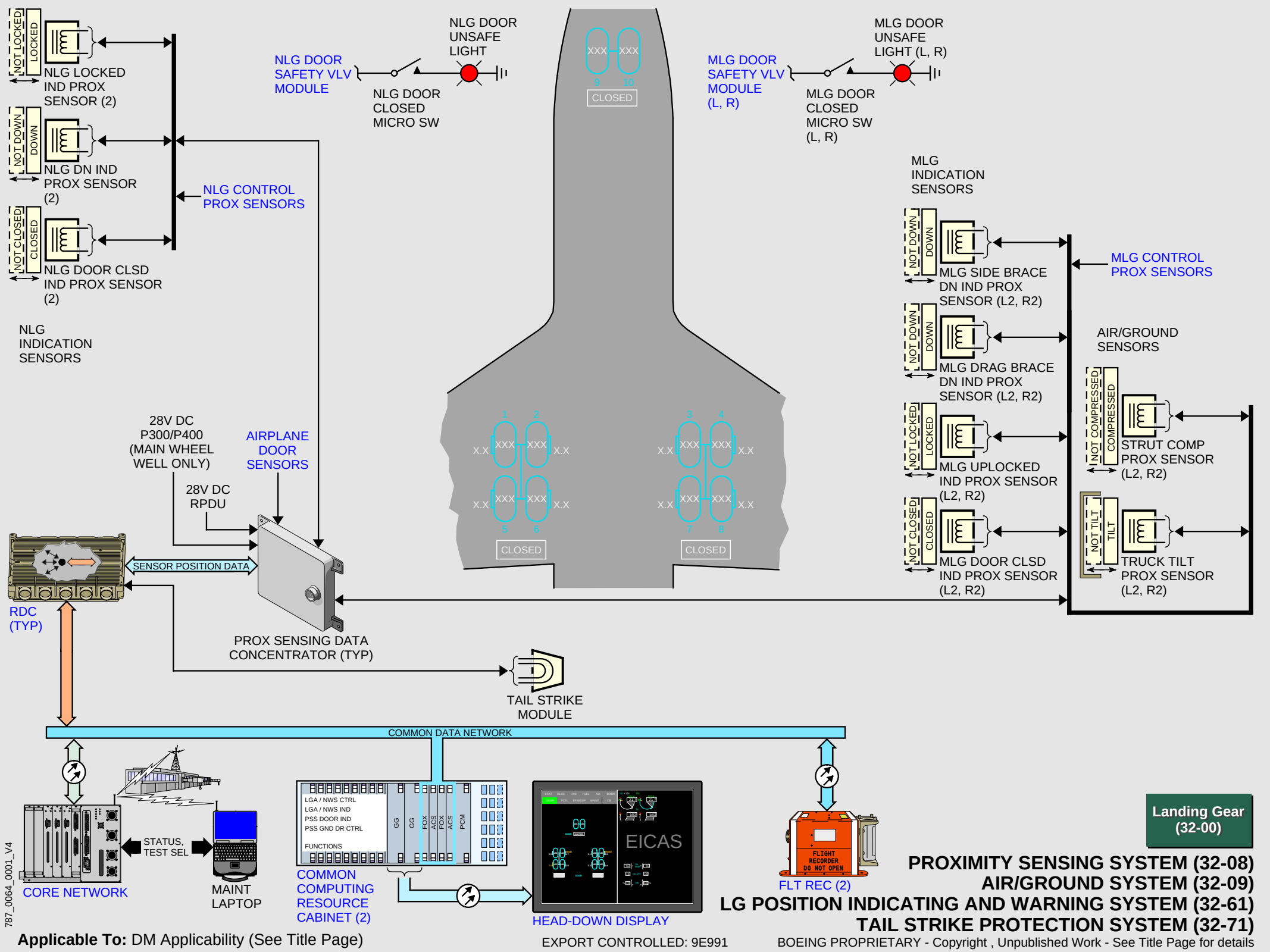
787_0062_0001_V8

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

PRIMARY DISPLAY SYSTEM (31-61)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0064_0001_V4

Landing Gear (32-00)

PROXIMITY SENSING SYSTEM (32-08)
AIR/GROUND SYSTEM (32-09)
LG POSITION INDICATING AND WARNING SYSTEM (32-61)
TAIL STRIKE PROTECTION SYSTEM (32-71)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

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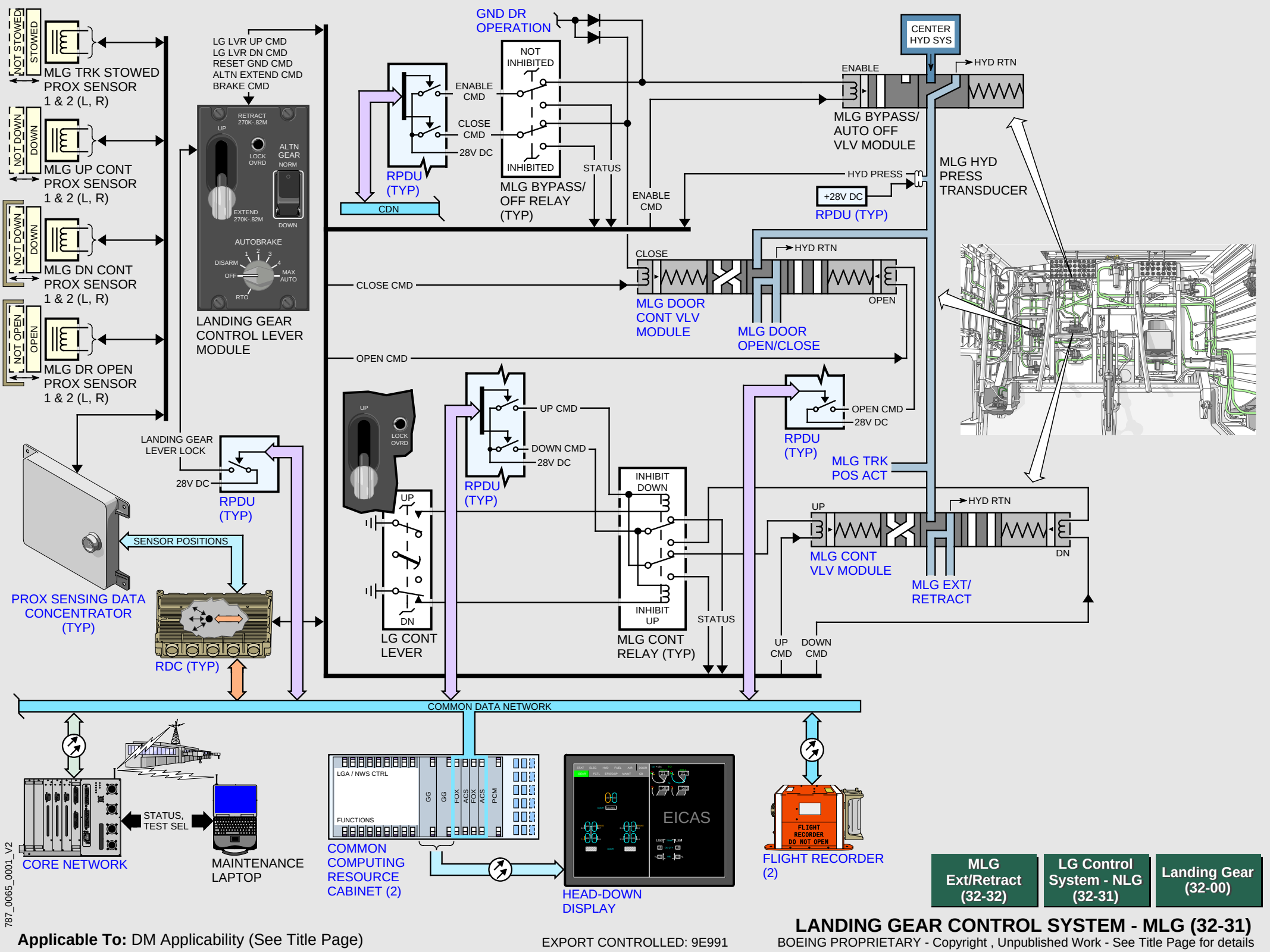

787_0065_0001_V2

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

MLG Ext/Retract (32-32) | LG Control System - NLG (32-31) | Landing Gear (32-00)

LANDING GEAR CONTROL SYSTEM - MLG (32-31)

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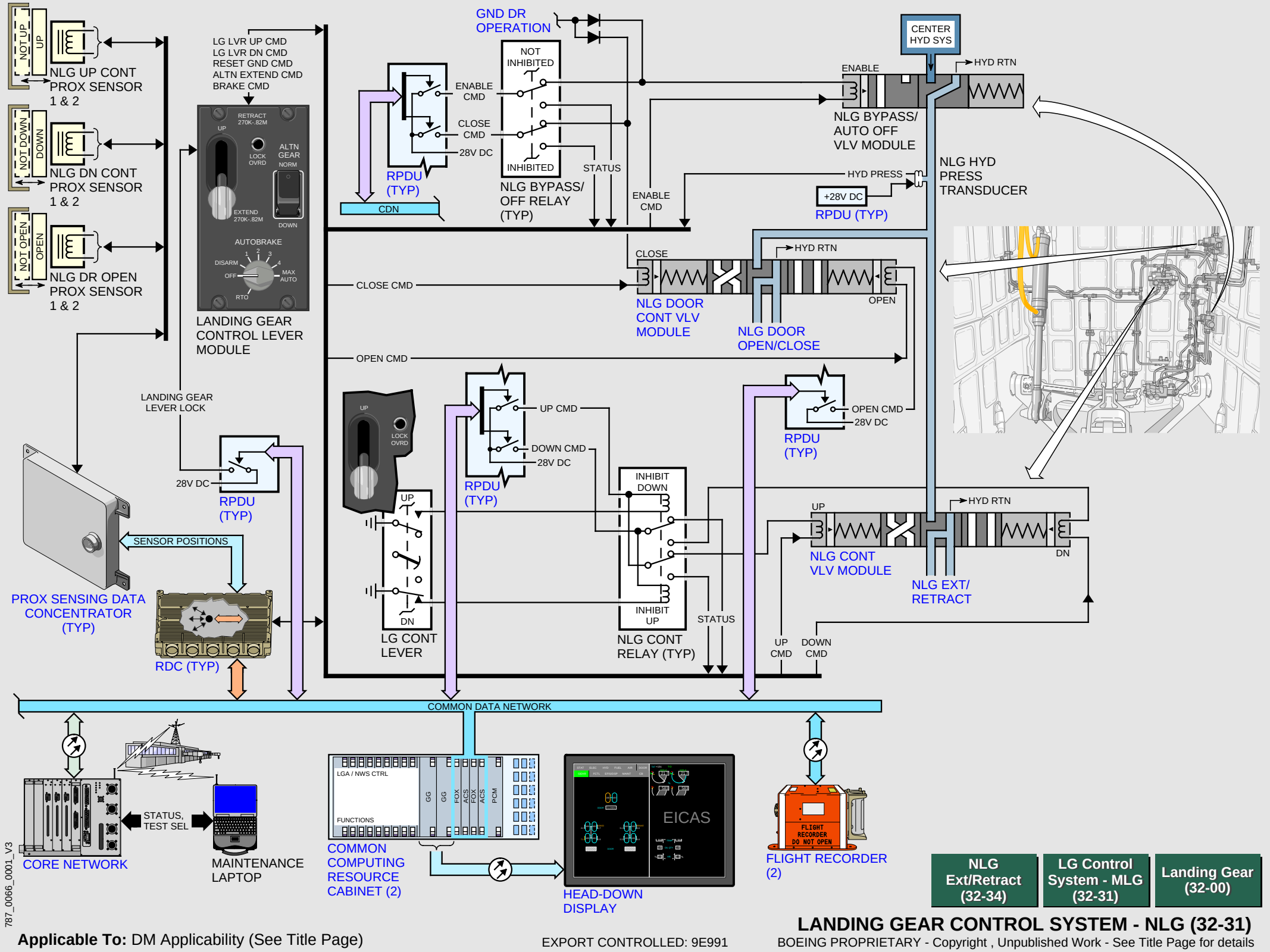


787_0066_0001_V3

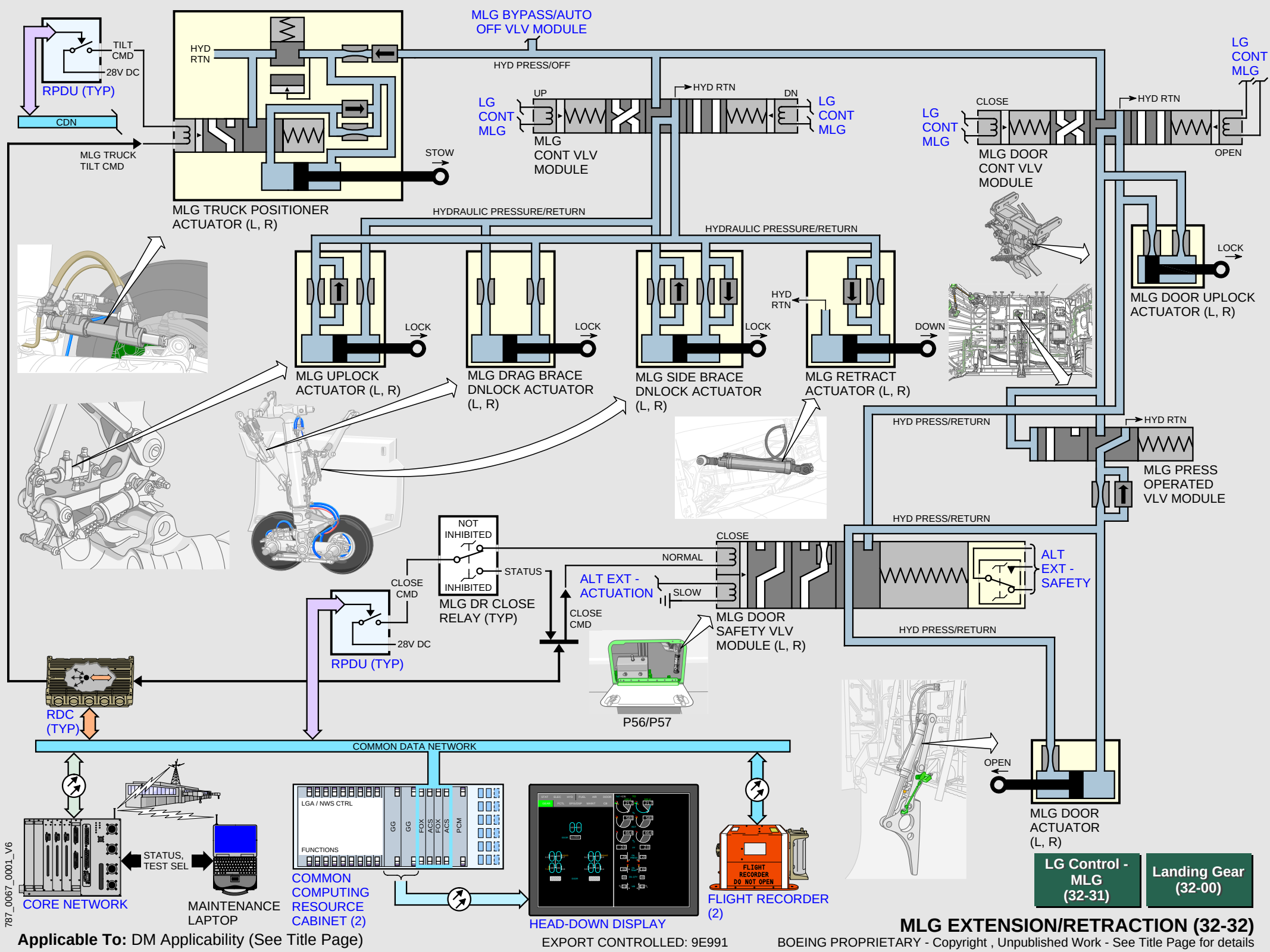
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

NLG Ext/Retract (32-34) | LG Control System - MLG (32-31) | Landing Gear (32-00)

LANDING GEAR CONTROL SYSTEM - NLG (32-31)

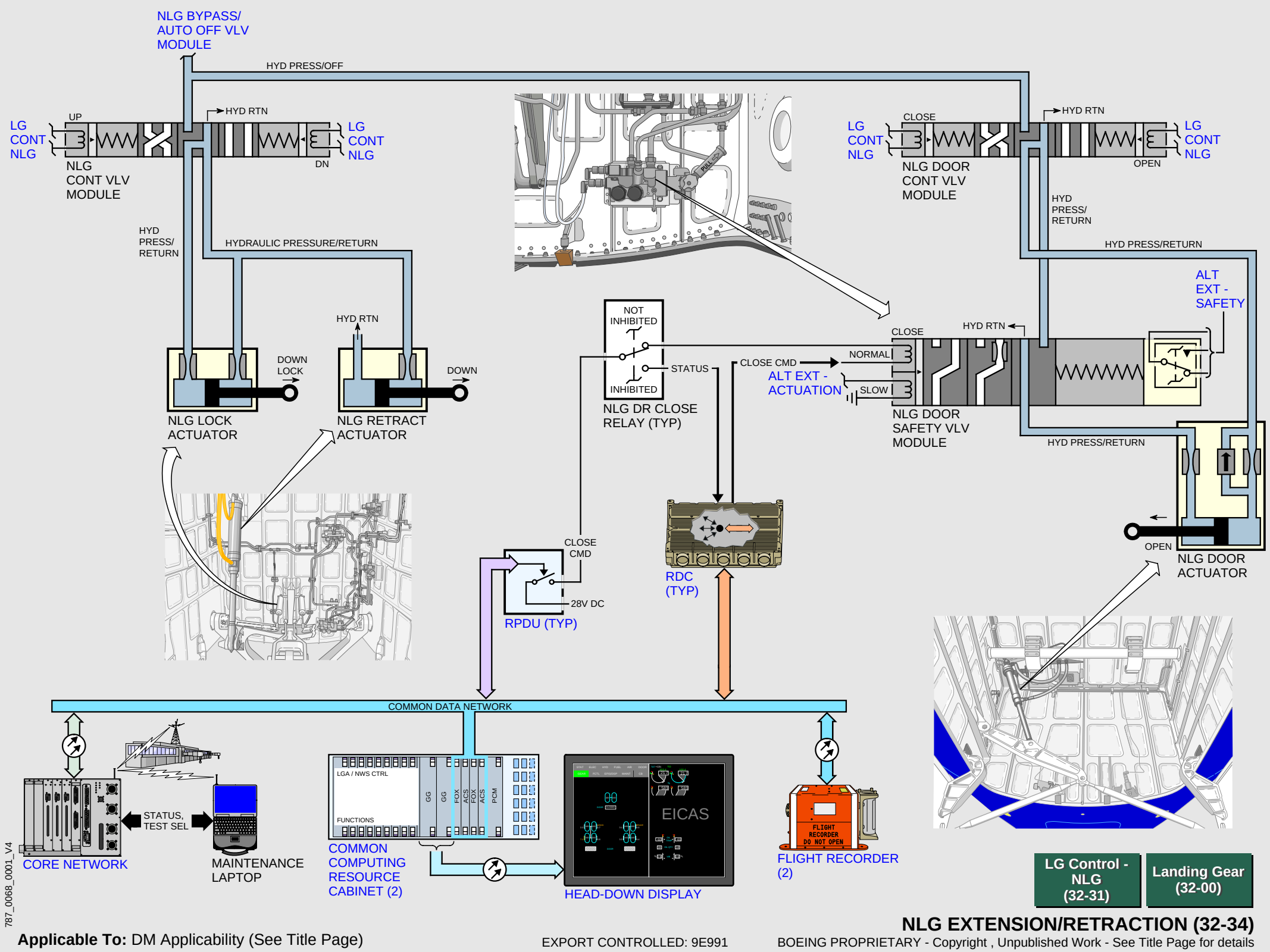


MLG EXTENSION/RETRACTION (32-32)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0068_0001_V4

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

LG Control - NLG (32-31)

Landing Gear (32-00)

NLG EXTENSION/RETRACTION (32-34)

+28V DC
RPDU (TYP)
NOT ARMED CMD
ARMED CMD
NLG ARM DOORS SW
CLOSE CMD
NOT CLOSE CMD
NLG DOORS CLOSE SW

NLG EXTEND/ RETRACT
CLOSE
NORMAL
SLOW
NLG DOOR SAFETY VLV MODULE
ALT EXT - SAFETY

NLG BYPASS/ AUTO OFF VLV MODULE
NLG DOOR CONT VLV MOD

NLG DR SLOW CLOSE CMD
MLG DR SLOW CLOSE CMD

MLG EXTEND/ RETRACT
MLG DOOR SAFETY VLV MODULE (L, R)

MLG BYPASS/ AUTO OFF VLV MODULE
MLG DOOR CONT VLV MOD

+28V DC
RPDU (TYP)
MLG ARM DOORS SW
ALL DOORS OPEN/MLG DOORS CLOSE SW
OPEN CMD

ALTN GEAR
NORM
DOWN
NORM
DOWN
HOT BATT
ALTN GEAR SW

HOT BATT
MOTOR OFF CMD A
MOTOR ON CMD A
ALT EXT RELAY A
MOTOR OFF CMD B
MOTOR ON CMD B
ALT EXT RELAY B

ALTN EXTEND HYD OVERSIZE TUBE
CENTER HYD SYS
M
P
ALT EXTEND POWER PACK

ALTN EXT NLG DOOR RELEASE ACT
ALTN EXT MLG DOOR RELEASE ACT (L, R)
ALTN EXT NLG GEAR RELEASE ACT
ALTN EXT MLG GEAR RELEASE ACT (L, R)

P56
RDC (TYP)

COMMON DATA NETWORK
CORE NETWORK
STATUS, TEST SEL
MAINTENANCE LAPTOP
LGA / NWS CTRL
FUNCTIONS
GG
GG
FOX
ACS
FOX
ACS
PCM
COMMON COMPUTING RESOURCE CABINET (2)
EICAS
HEAD-DOWN DISPLAY
FLIGHT RECORDER DO NOT OPEN
FLIGHT RECORDER (2)

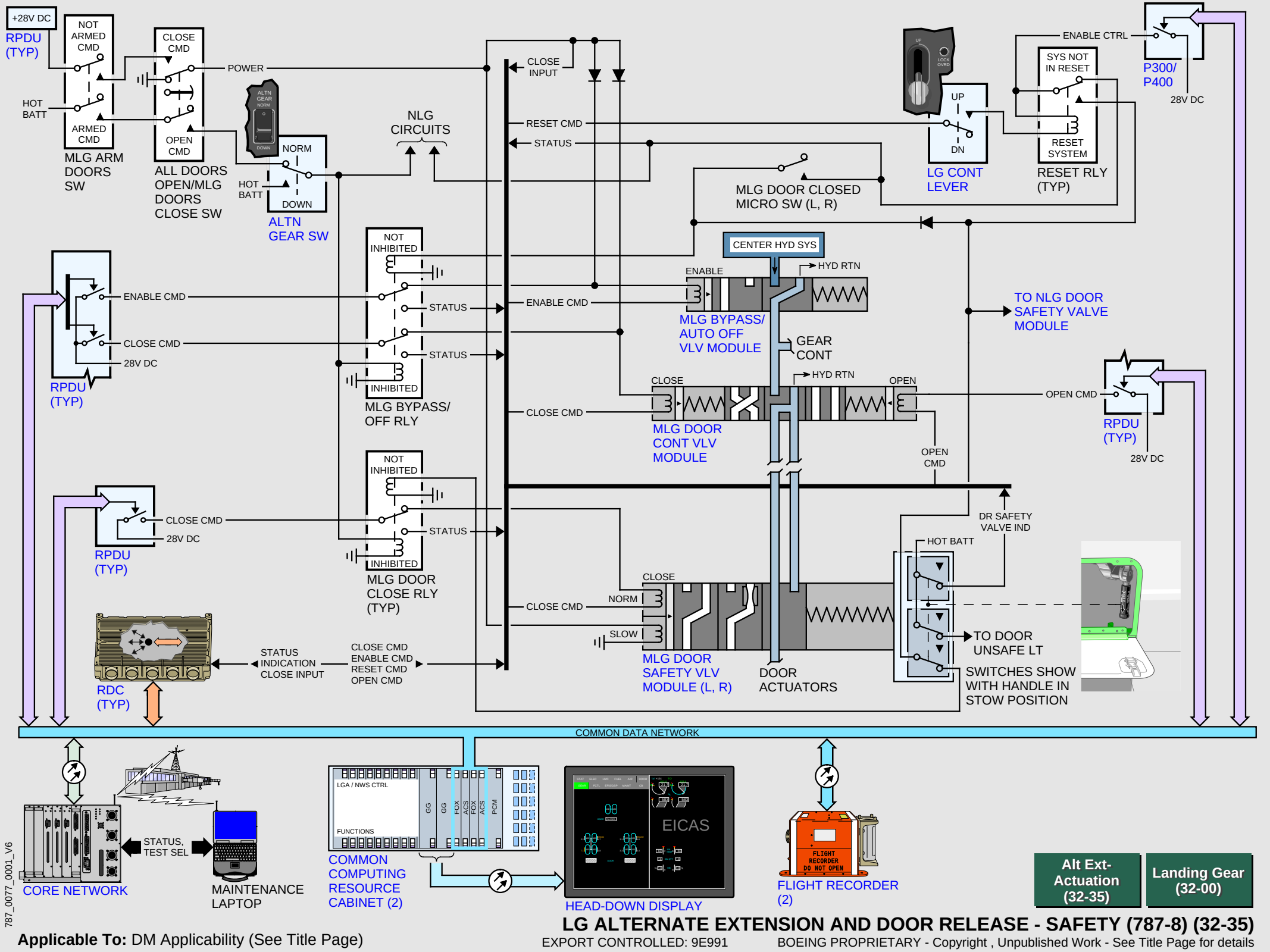
787_0149_0001_V4

Alt Ext - Safety (32-35)
Landing Gear (32-00)

Applicable To: DM Applicability (See Title Page)

LG ALTERNATE EXTENSION AND DOOR RELEASE - ACTUATION (32-35)

EXPORT CONTROLLED: 9E991
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



Applicable To: DM Applicability (See Title Page)

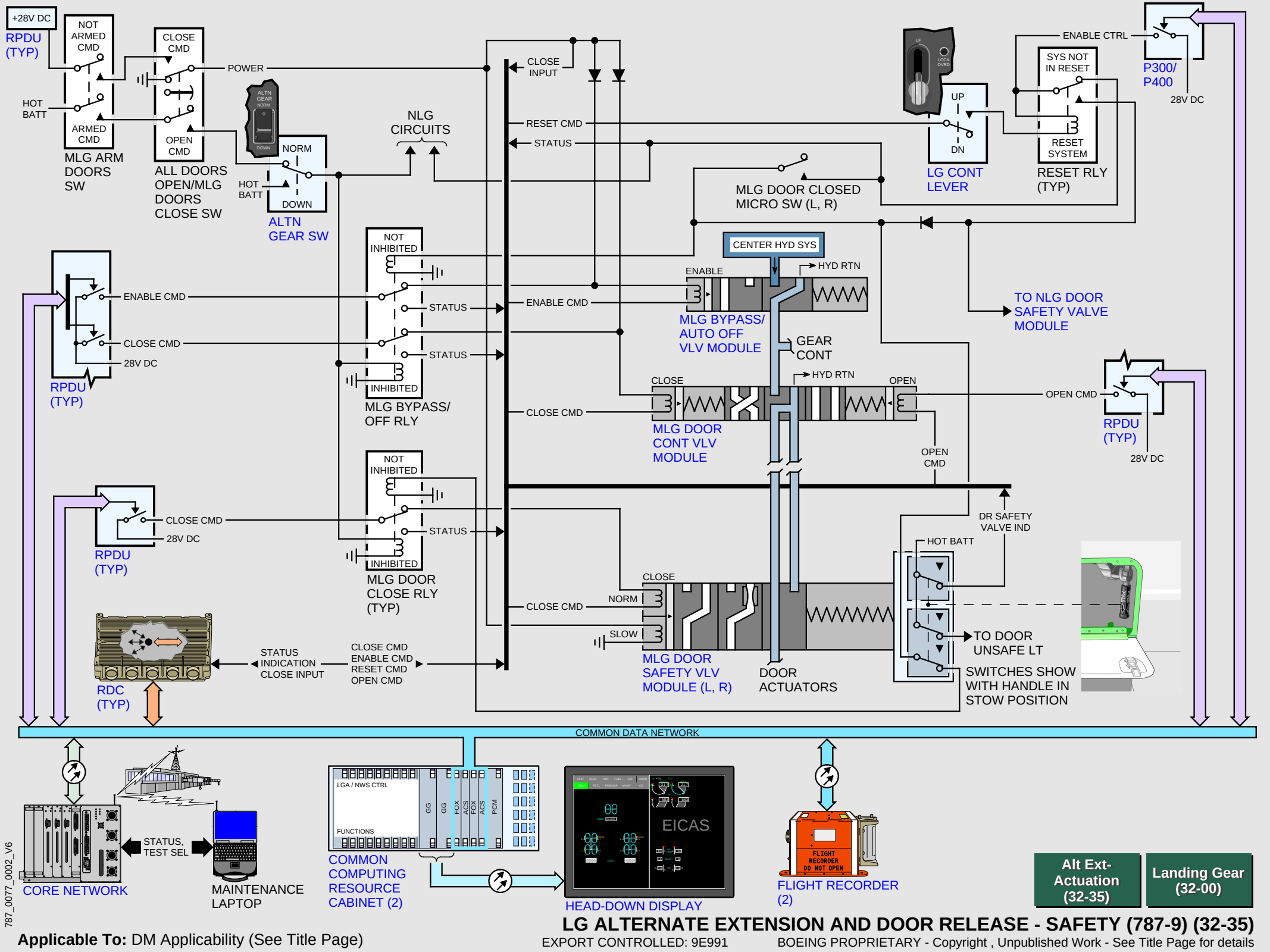
LG ALTERNATE EXTENSION AND DOOR RELEASE - SAFETY (787-8) (32-35)

Alt Ext-Actuation (32-35)

Landing Gear (32-00)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



Applicable To: DM Applicability (See Title Page)

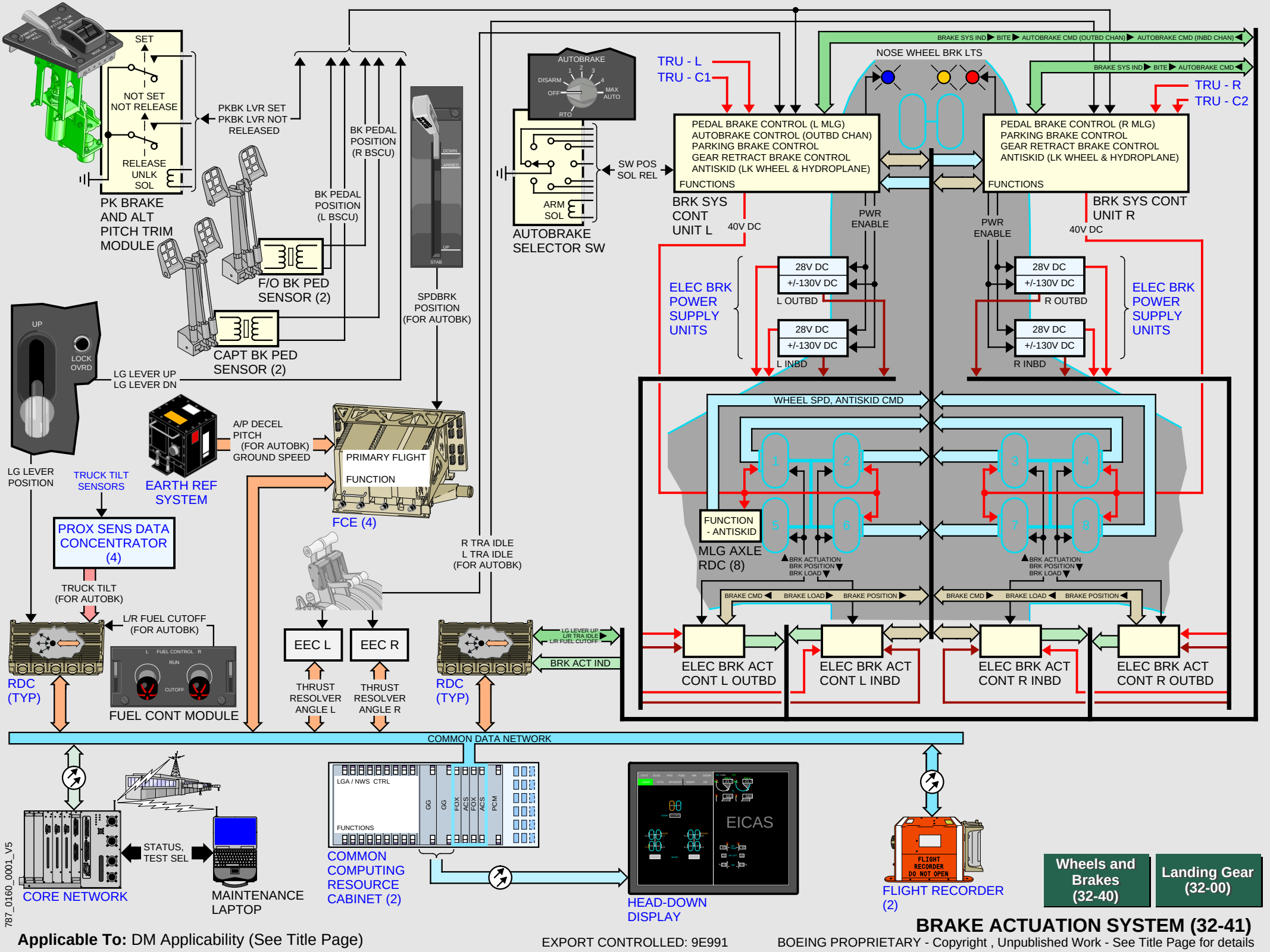
LG ALTERNATE EXTENSION AND DOOR RELEASE - SAFETY (787-9) (32-35)

Alt Ext-Actuation (32-35)

Landing Gear (32-00)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



Applicable To: DM Applicability (See Title Page)

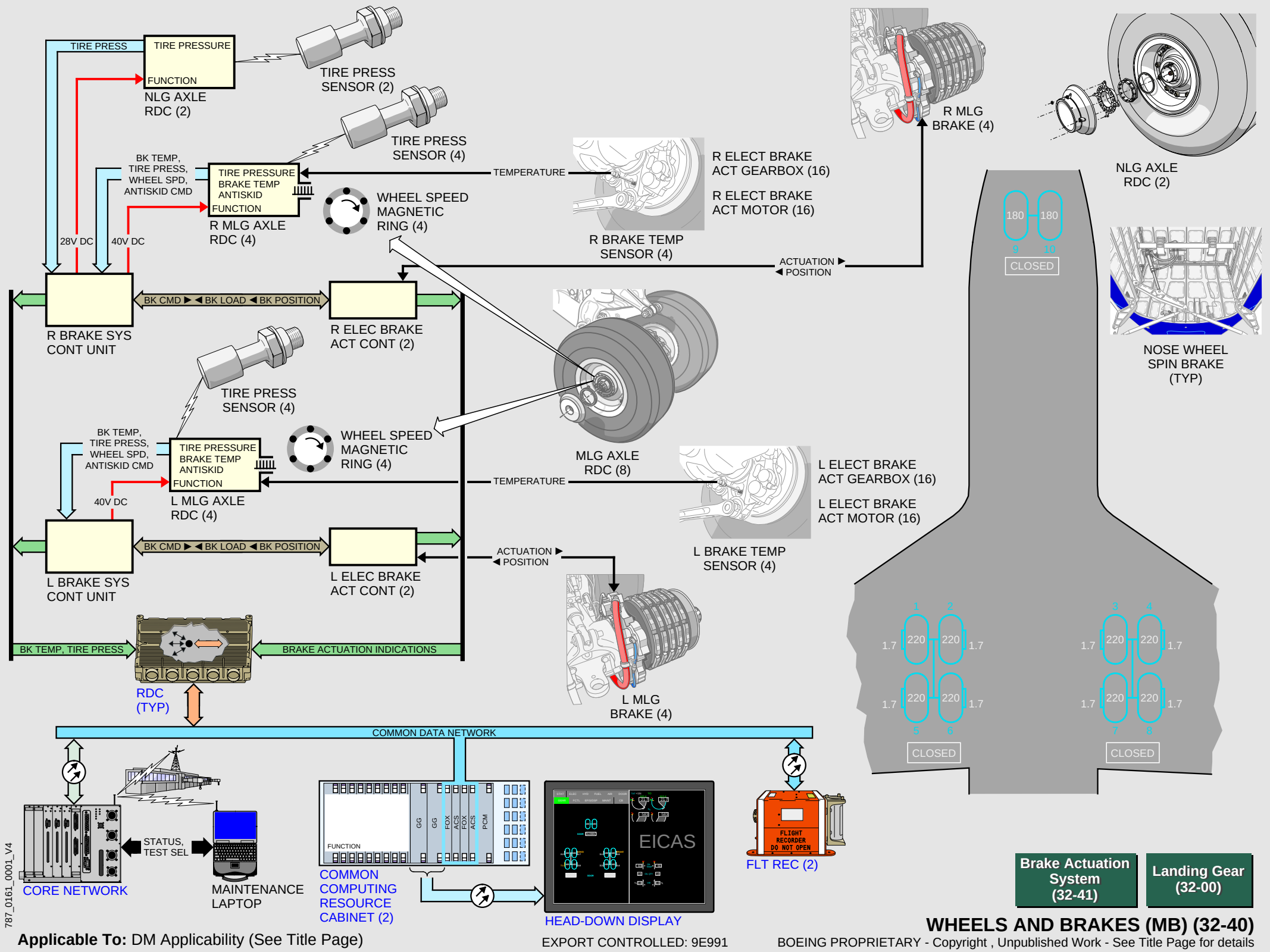
EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

Wheels and Brakes (32-40)

Landing Gear (32-00)

BRAKE ACTUATION SYSTEM (32-41)



787_0161_0001_V4

Applicable To: DM Applicability (See Title Page)

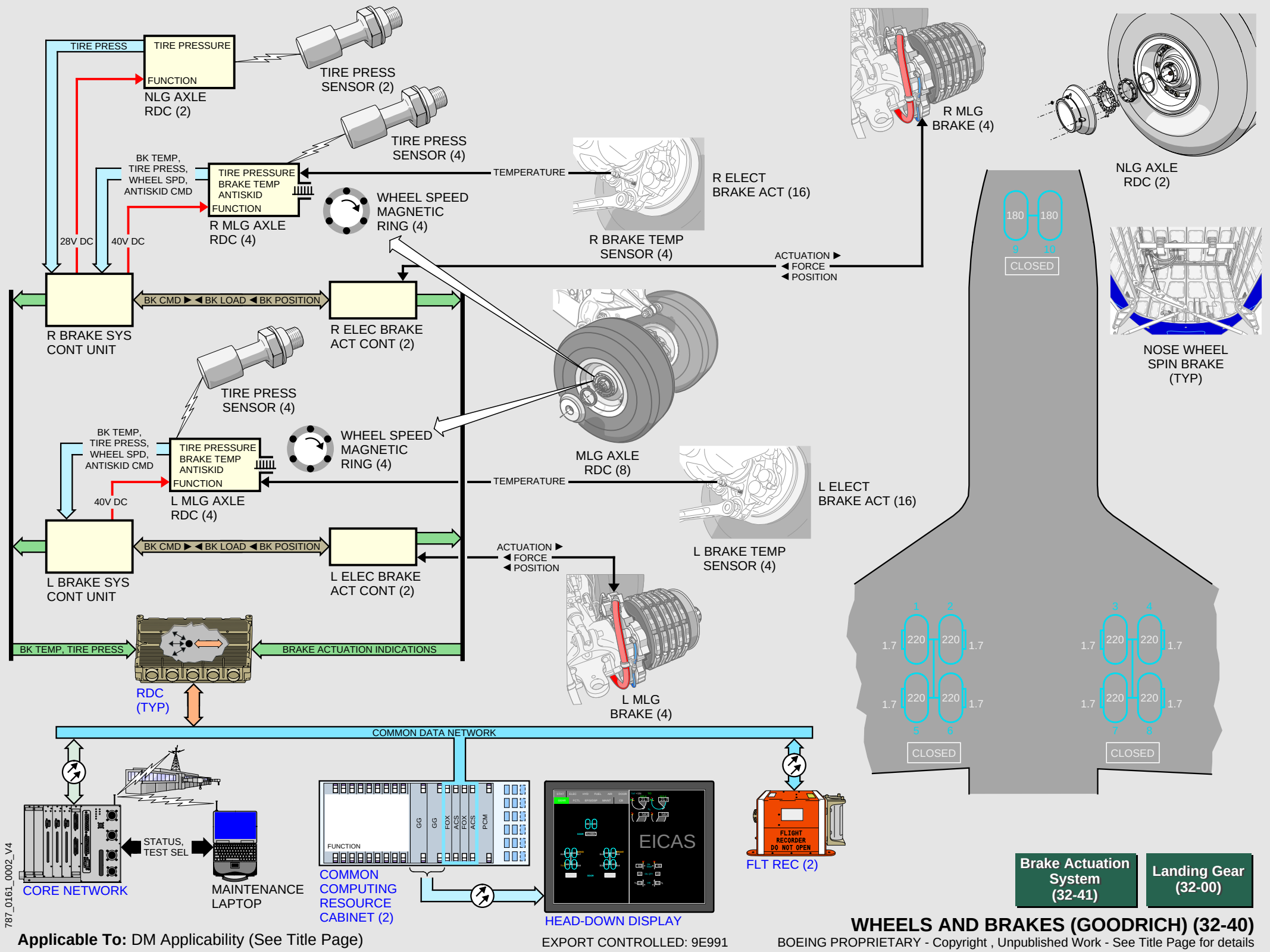
EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

Brake Actuation System (32-41)

Landing Gear (32-00)

WHEELS AND BRAKES (MB) (32-40)



Brake Actuation System (32-41)

Landing Gear (32-00)

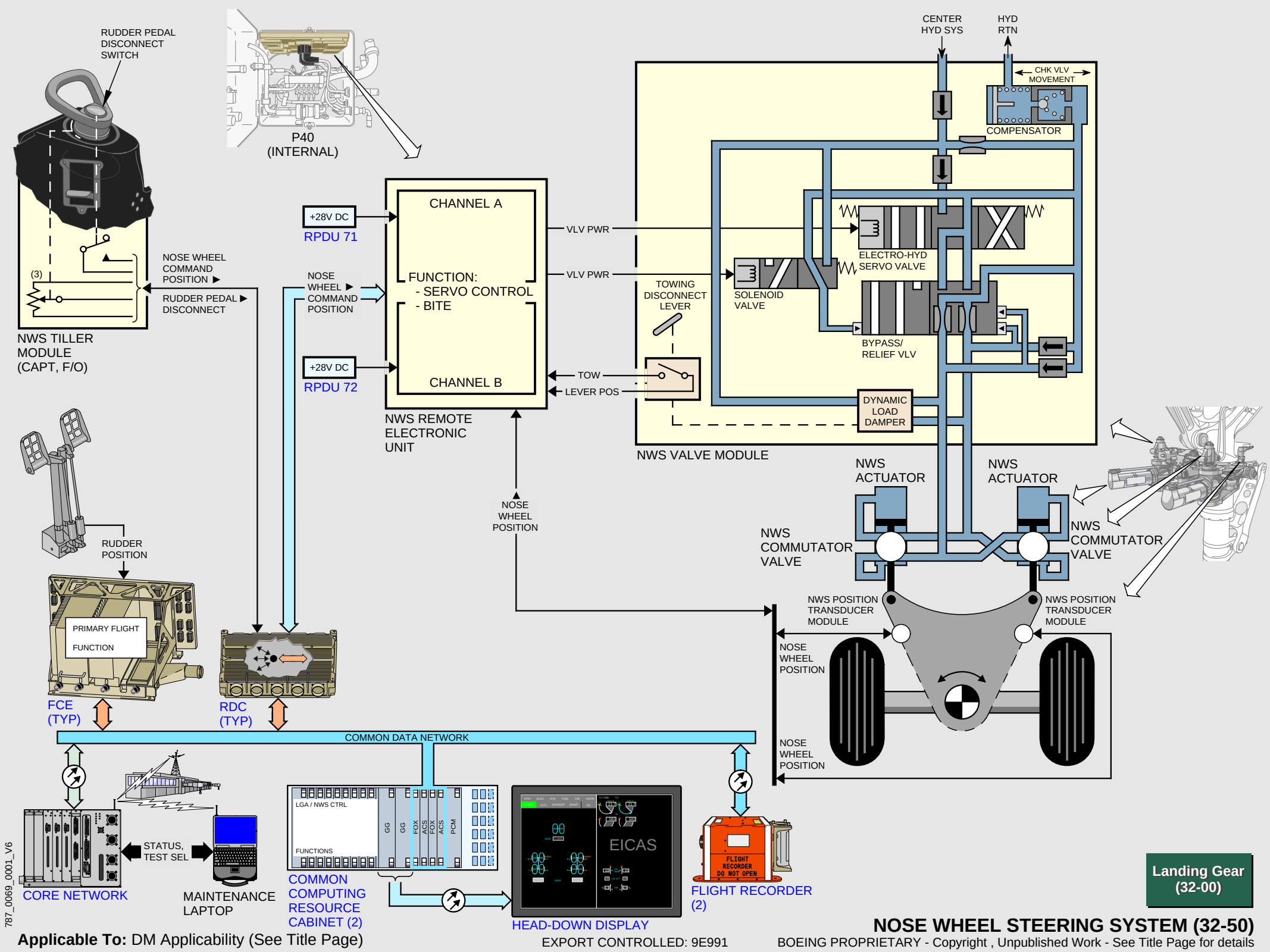
WHEELS AND BRAKES (GOODRICH) (32-40)

787_0161_0002_V4

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0069_0001_V6

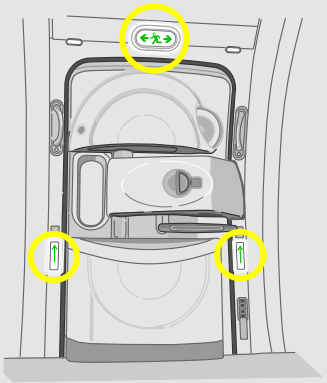
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

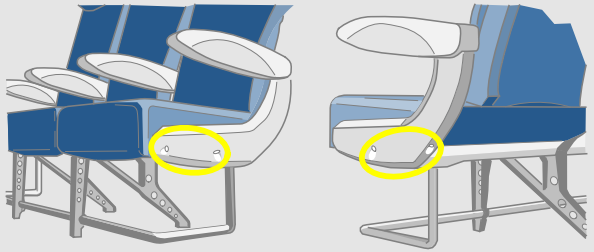
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

Landing Gear (32-00)

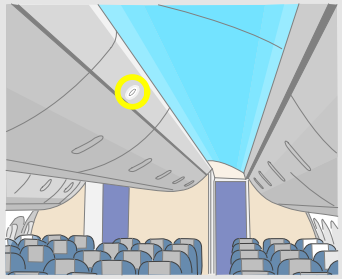
NOSE WHEEL STEERING SYSTEM (32-50)



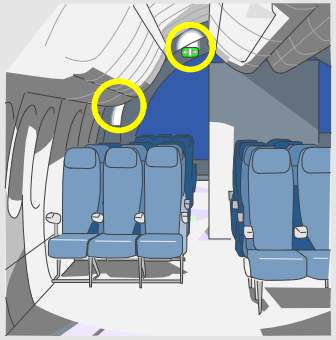
EXIT IDENTIFIER/
EXIT MARKING SIGN
(TYP)



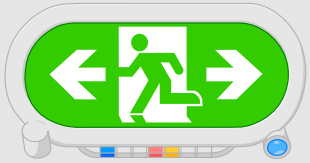
FLOOR PROXIMITY LIGHTS
(TYP)



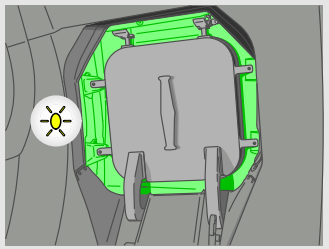
GENERAL
ILLUMINATION LIGHT
(TYP)



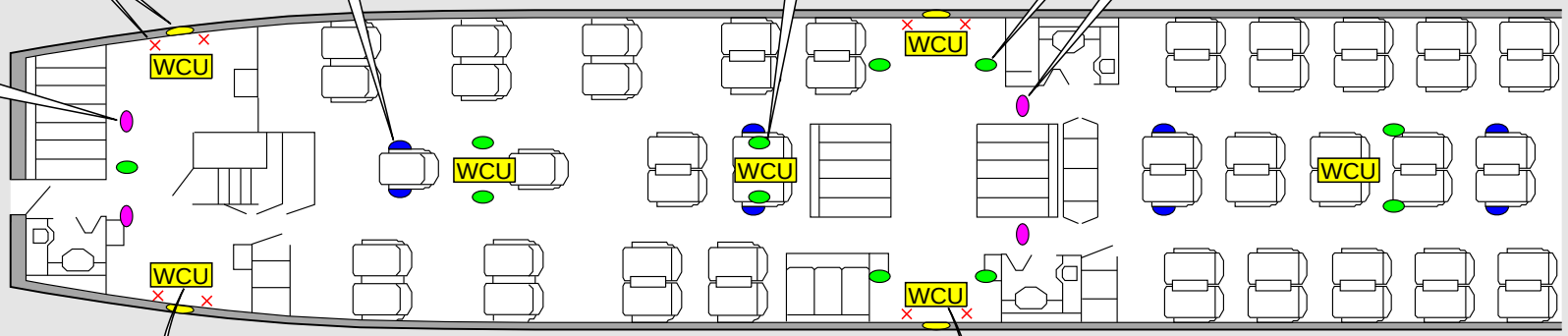
GENERAL
ILLUMINATION LIGHT/
EXIT LOCATOR
(TYP)

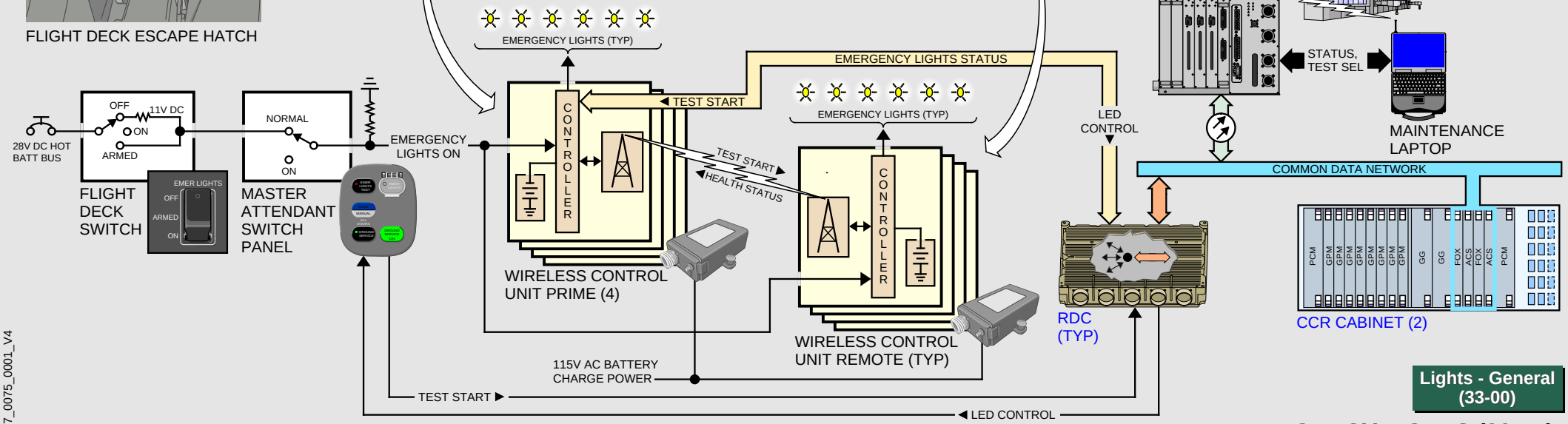


EXIT LOCATOR SIGN
(TYP)



FLIGHT DECK ESCAPE HATCH





787_0075_0001_V4

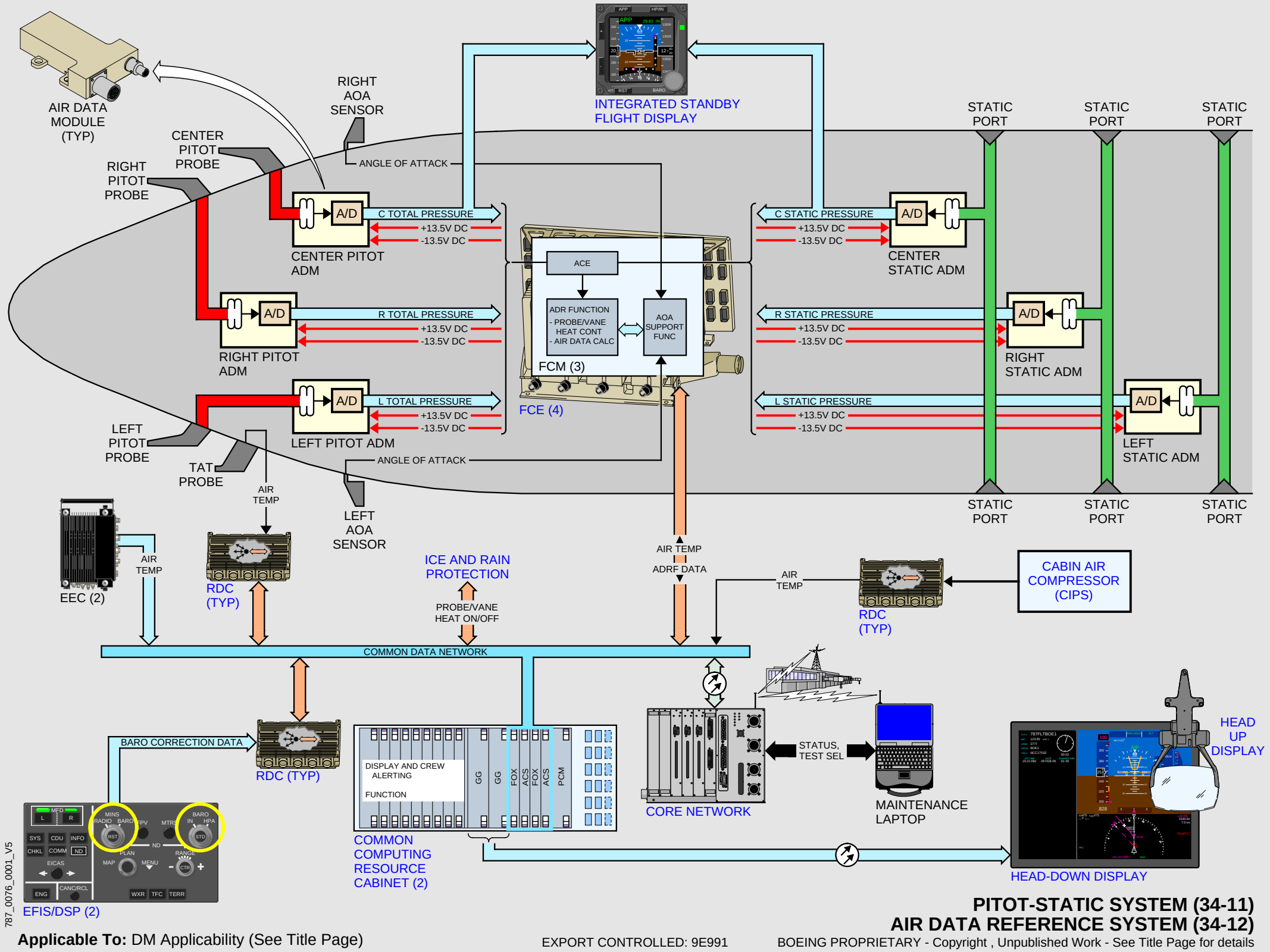
Lights - General (33-00)

EMERGENCY LIGHTS (33-51)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



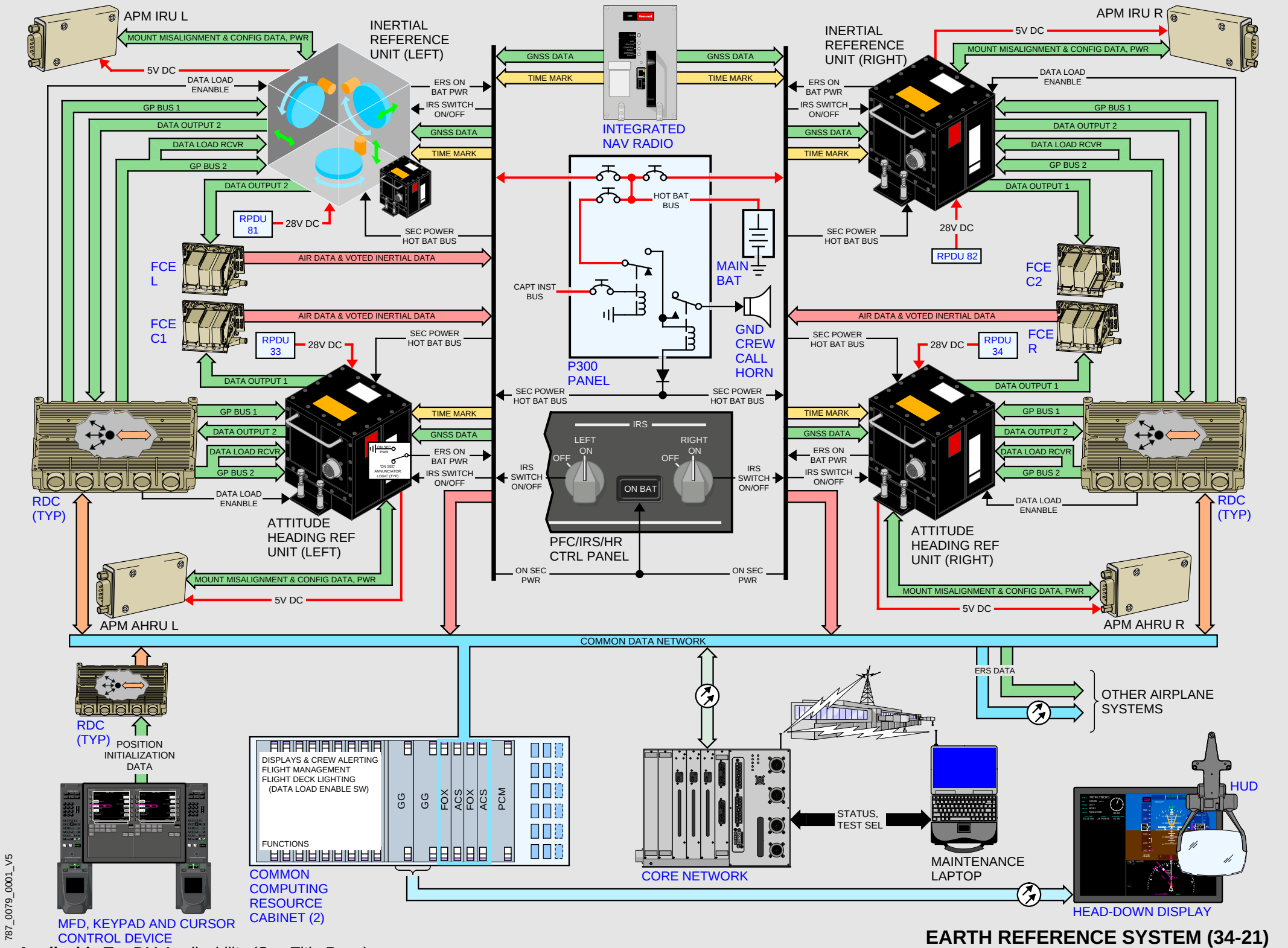
787_0076_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

PITOT-STATIC SYSTEM (34-11)
AIR DATA REFERENCE SYSTEM (34-12)



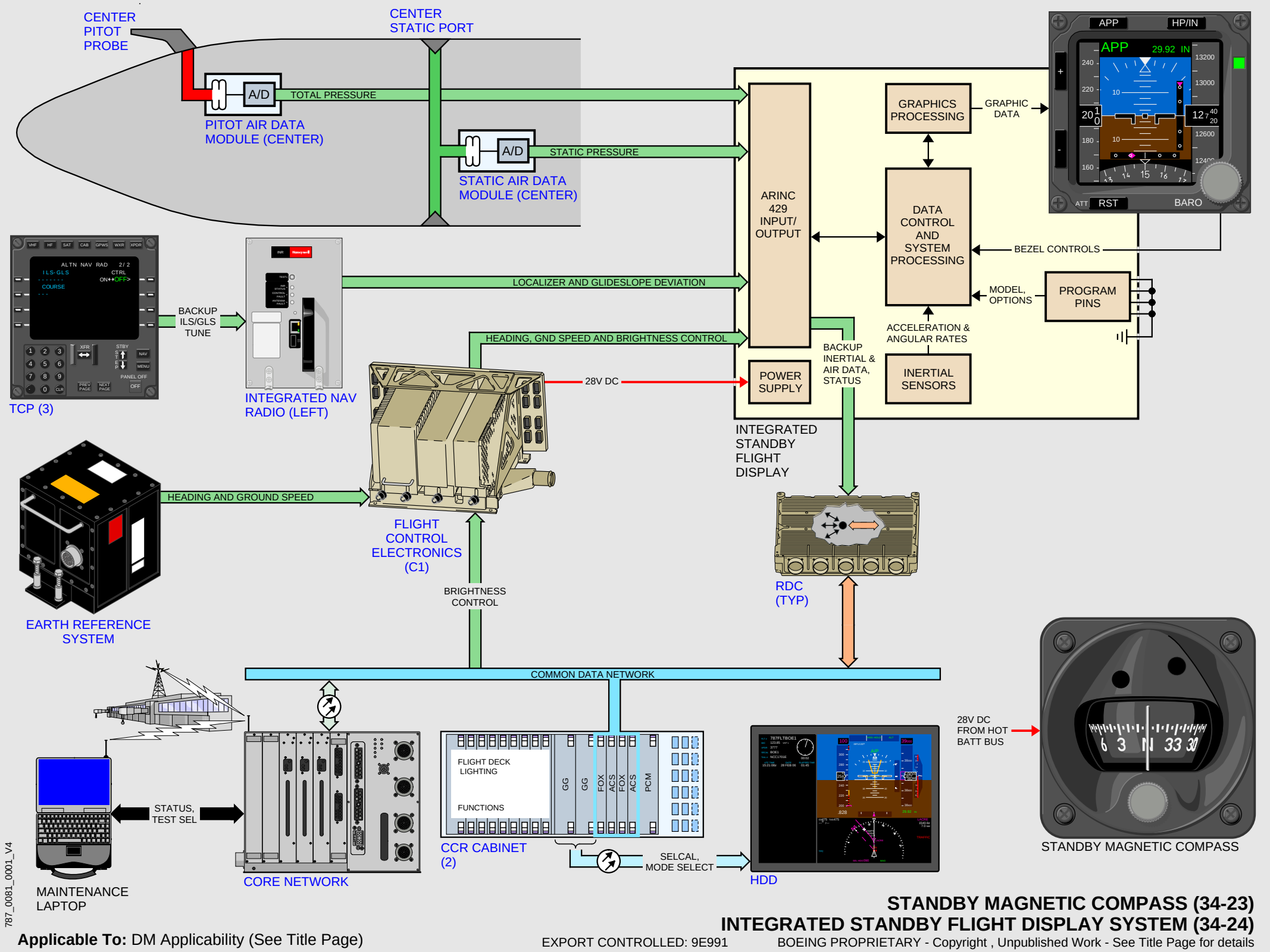
787_0079_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

EARTH REFERENCE SYSTEM (34-21)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



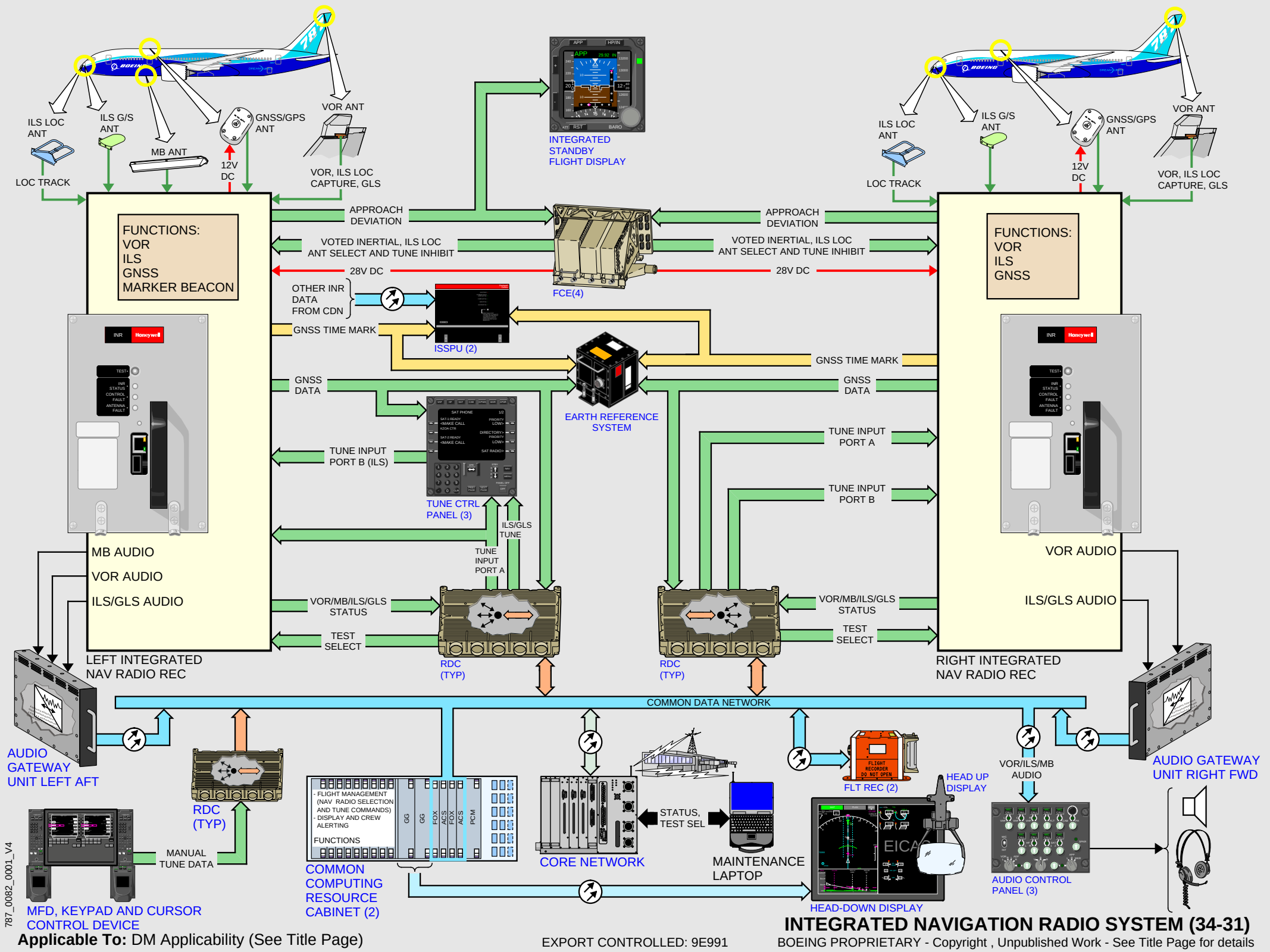
787_0081_0001_V4

STANDBY MAGNETIC COMPASS (34-23)
INTEGRATED STANDBY FLIGHT DISPLAY SYSTEM (34-24)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

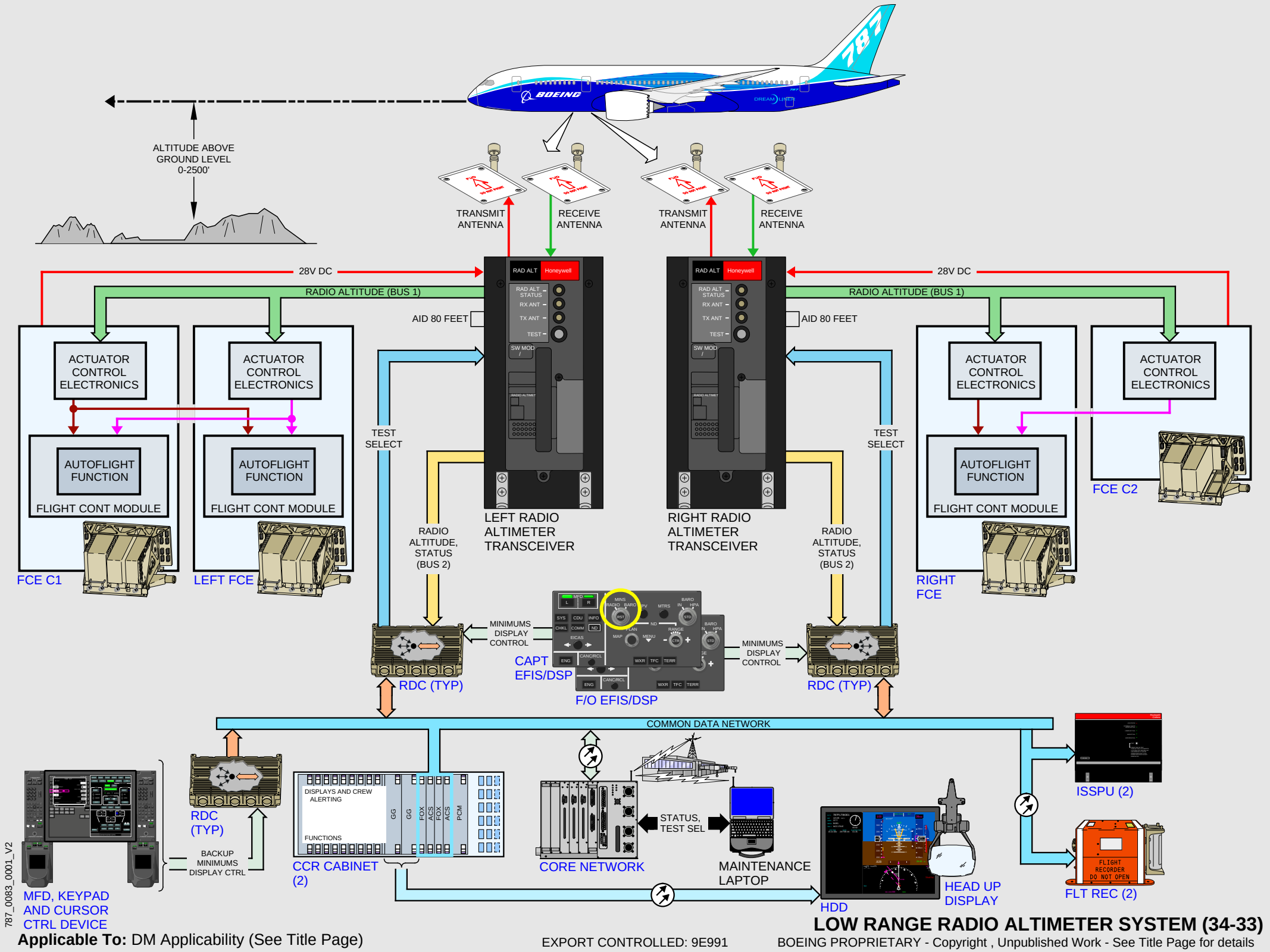


Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

INTEGRATED NAVIGATION RADIO SYSTEM (34-31)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

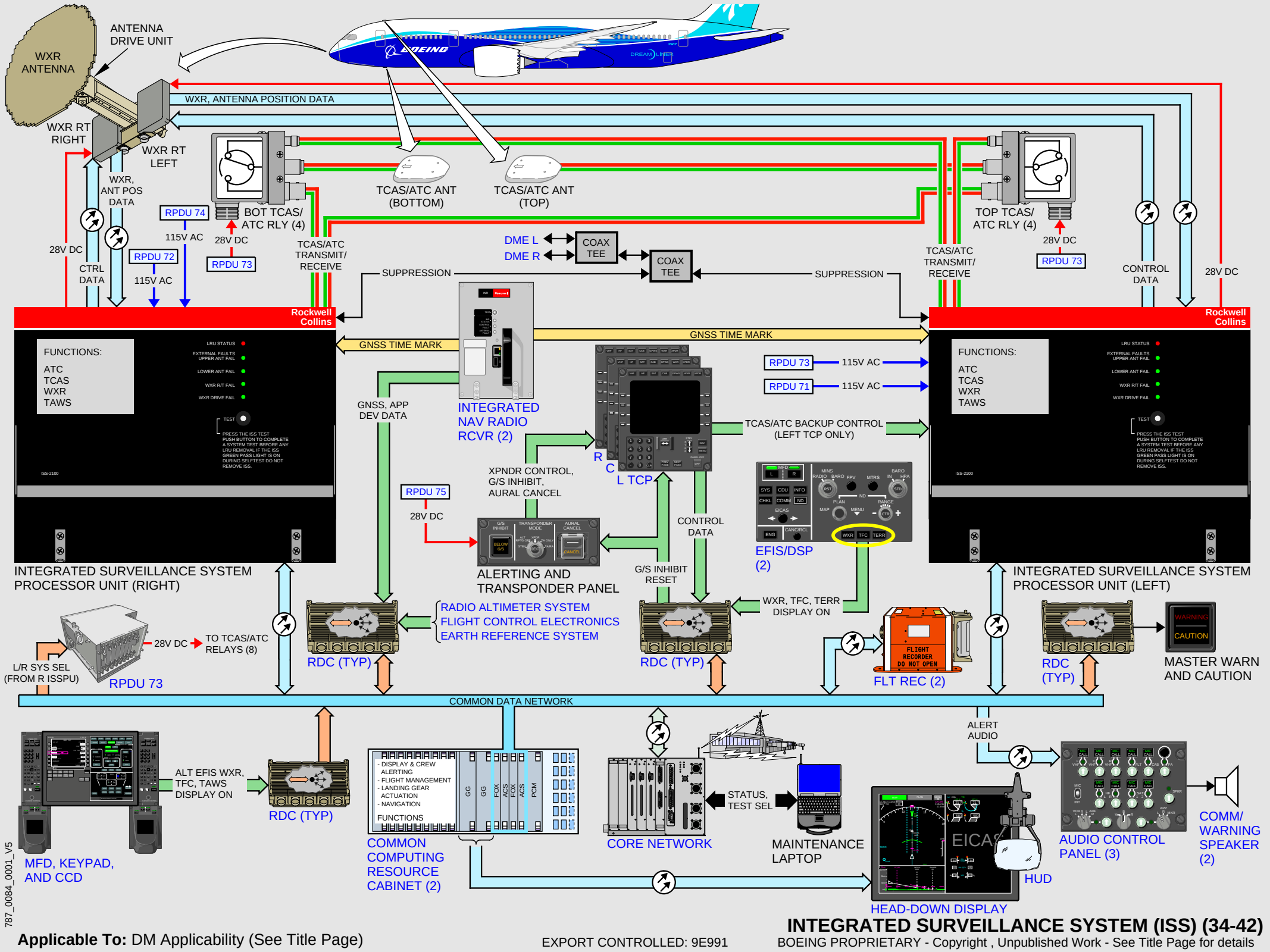


LOW RANGE RADIO ALTIMETER SYSTEM (34-33)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



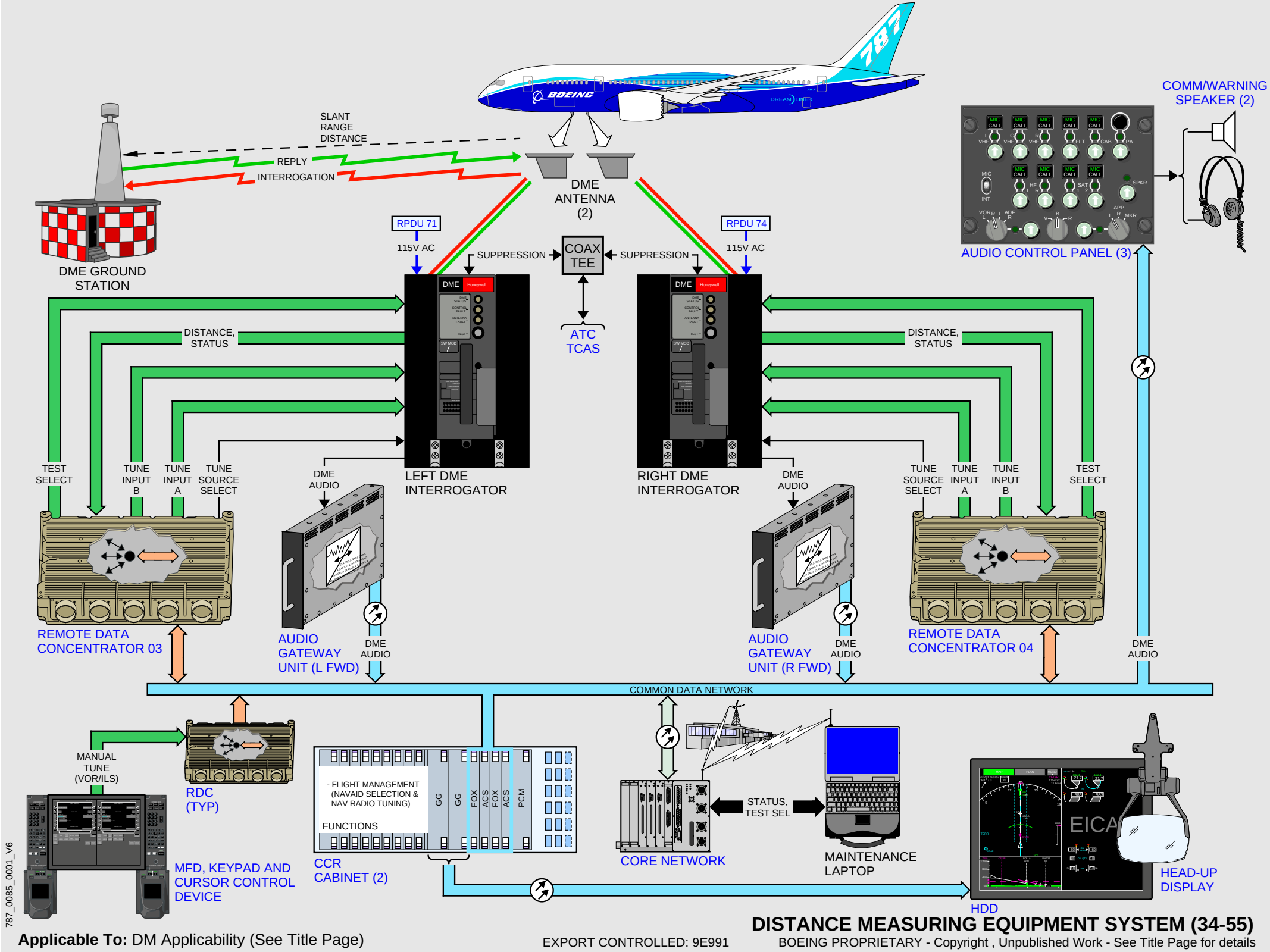
787_0084_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

INTEGRATED SURVEILLANCE SYSTEM (ISS) (34-42)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

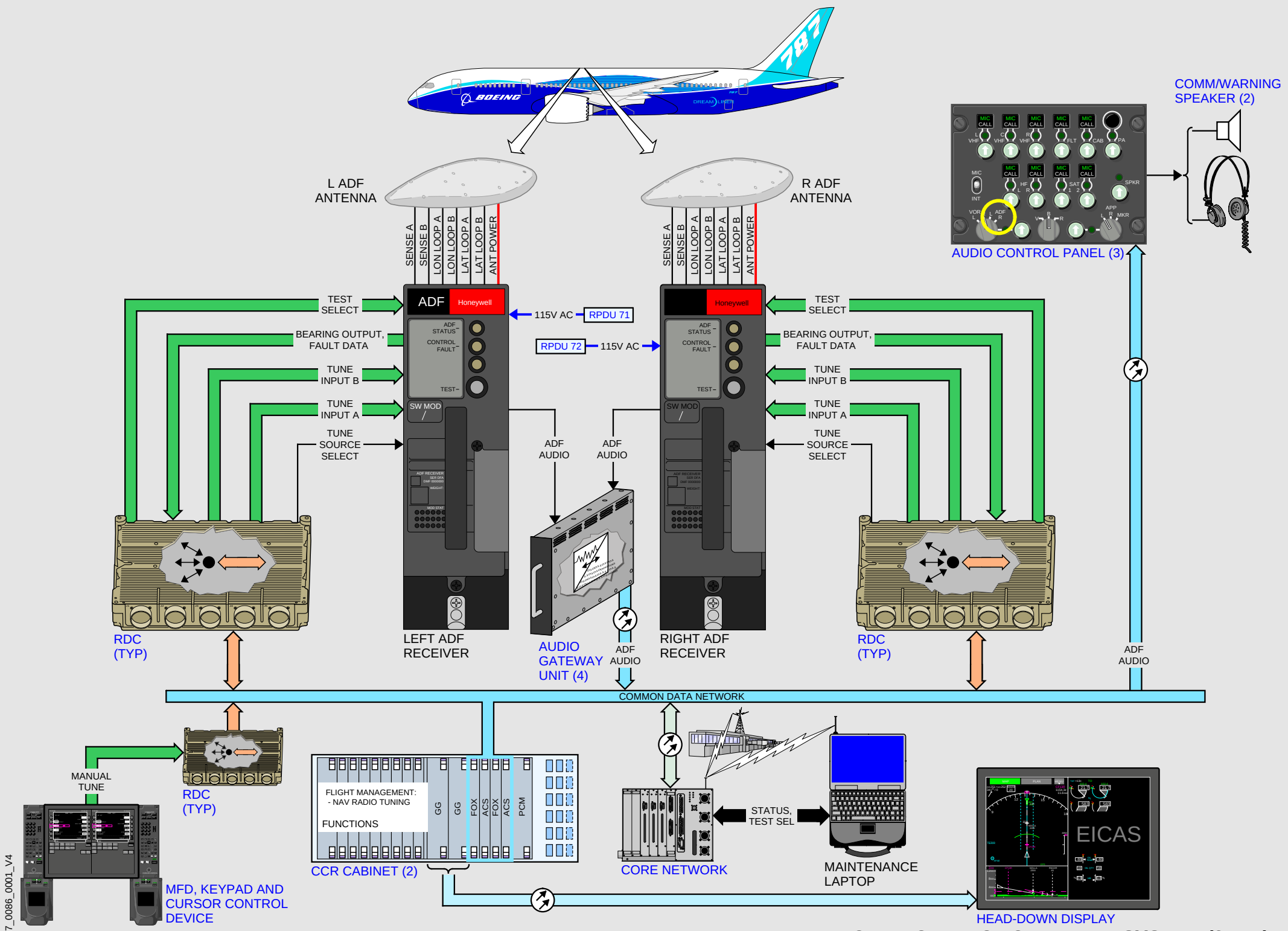


DISTANCE MEASURING EQUIPMENT SYSTEM (34-55)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



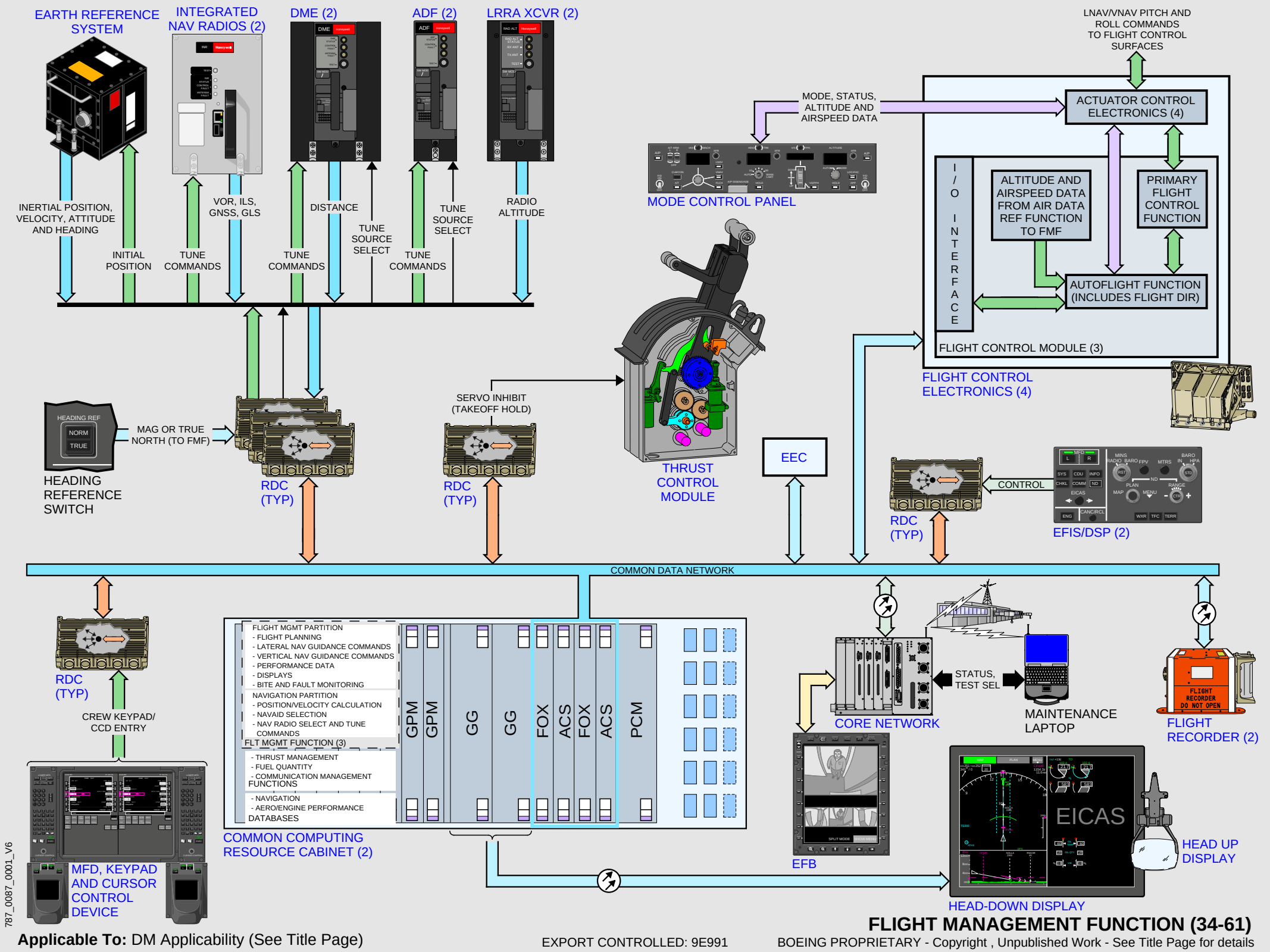
787_0086_0001_V4

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

AUTOMATIC DIRECTION FINDER SYSTEM (34-57)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



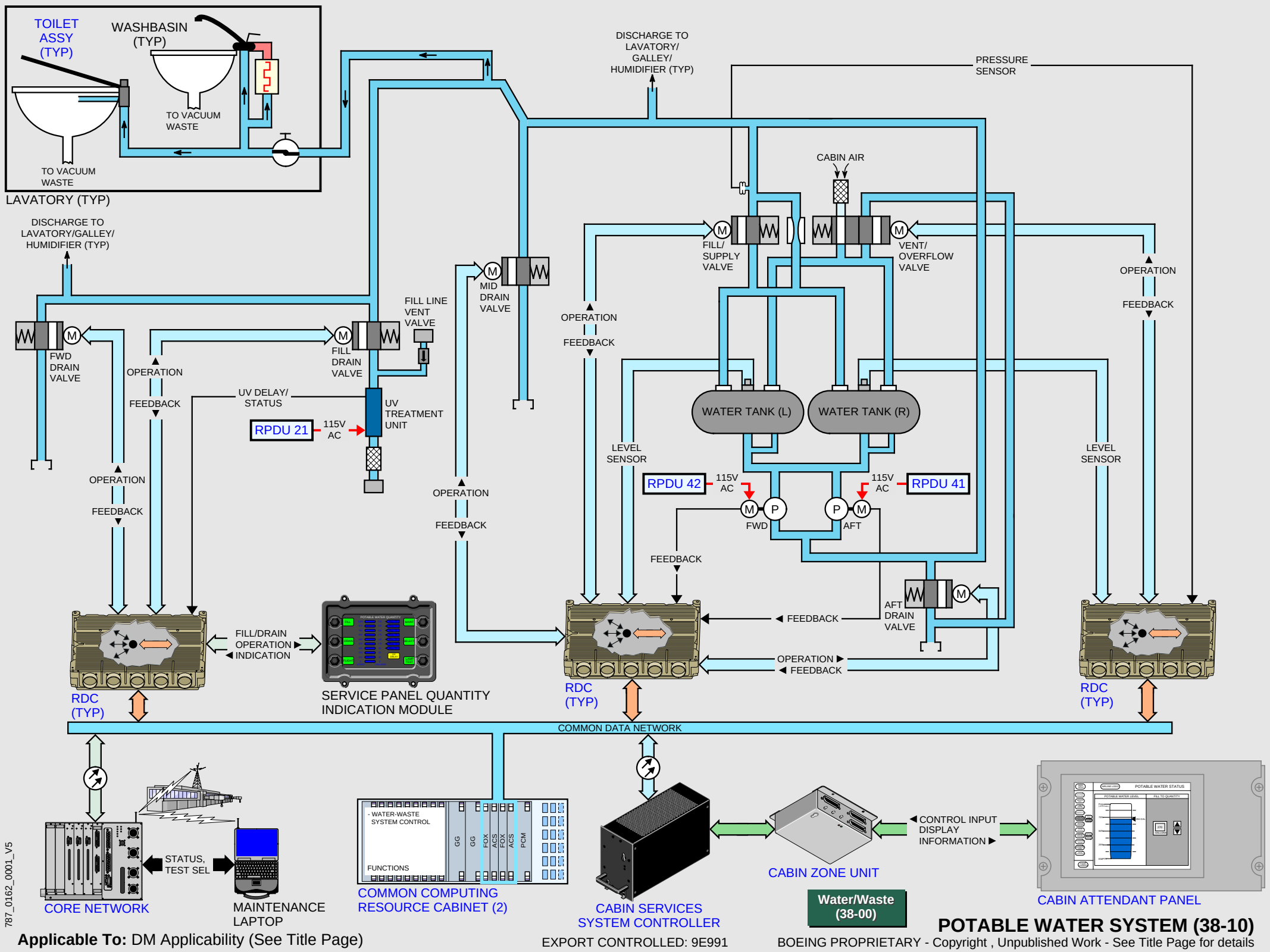
787_0087_0001_V6

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

FLIGHT MANAGEMENT FUNCTION (34-61)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0162_0001_V5

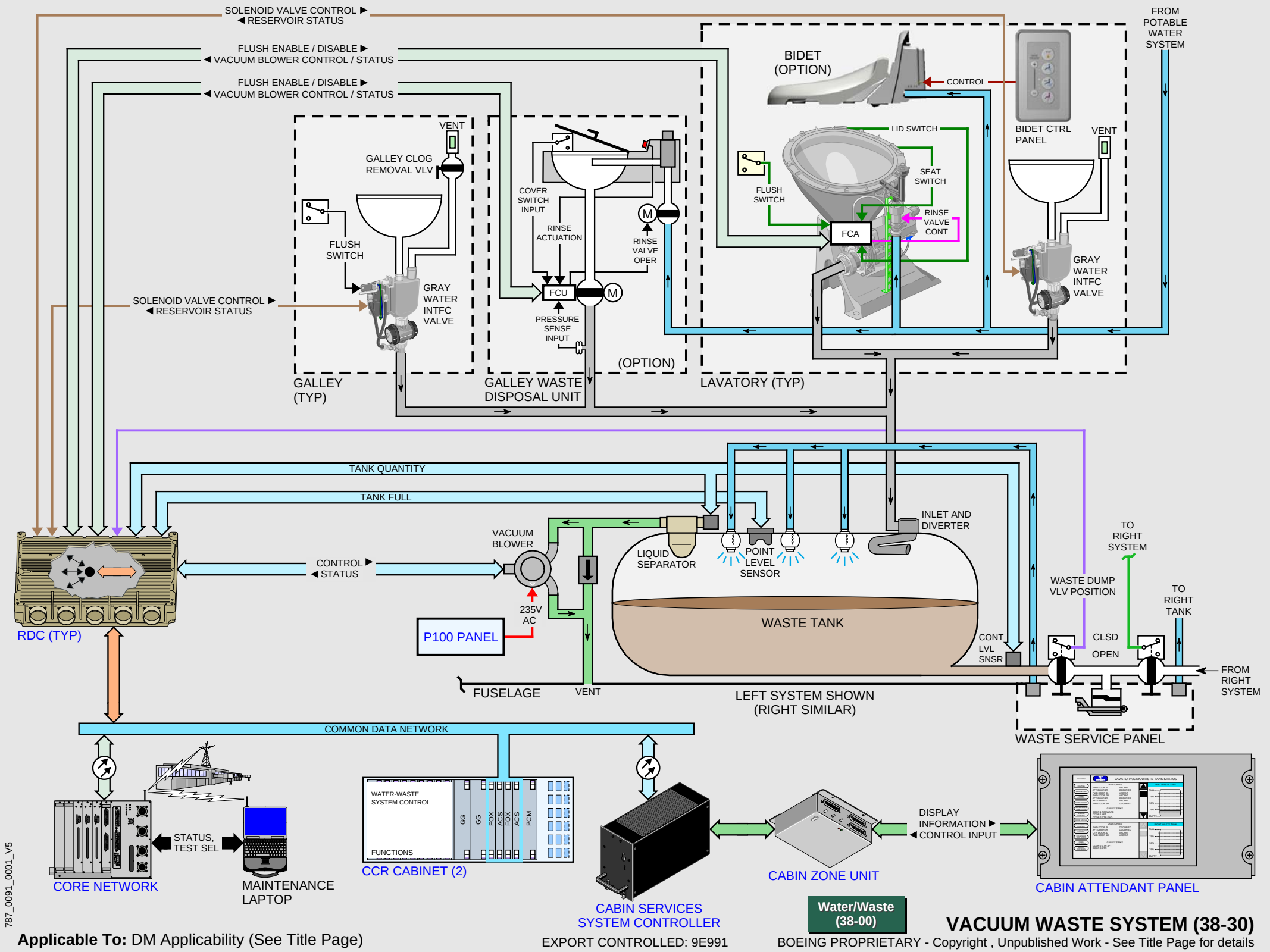
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

Water/Waste (38-00)

POTABLE WATER SYSTEM (38-10)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



787_0091_0001_V5

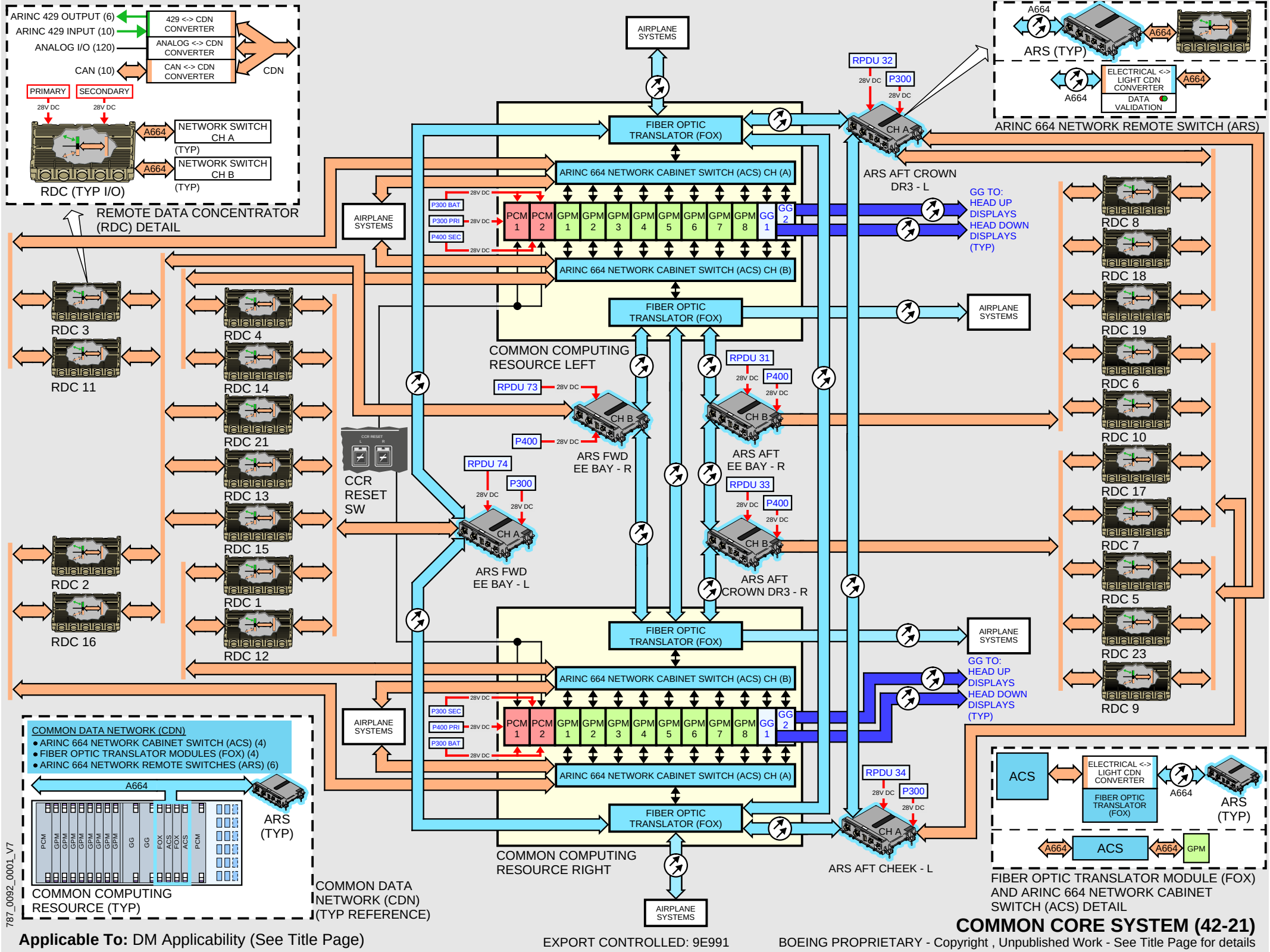
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

Water/Waste (38-00)

VACUUM WASTE SYSTEM (38-30)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

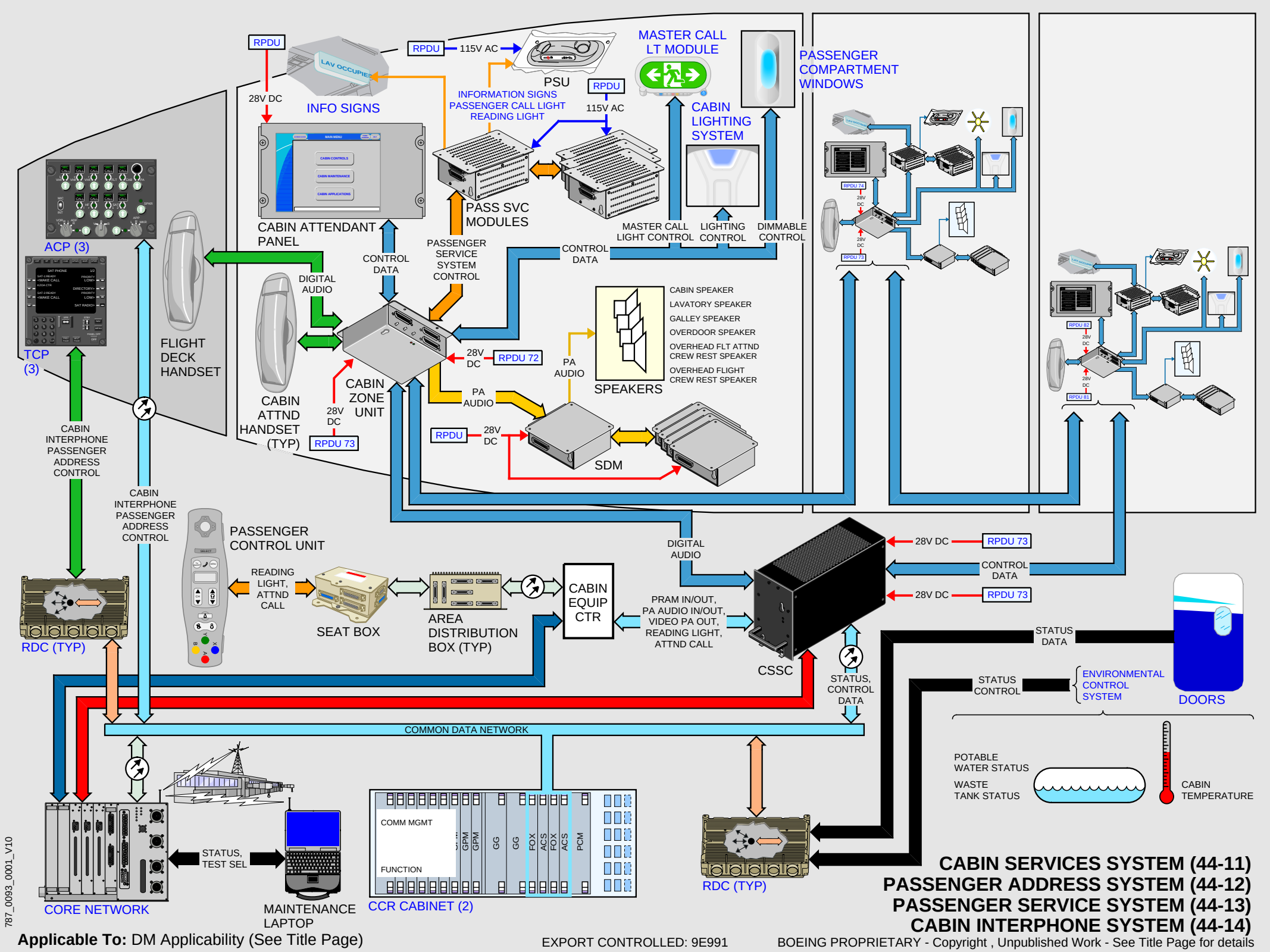


Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

COMMON CORE SYSTEM (42-21)



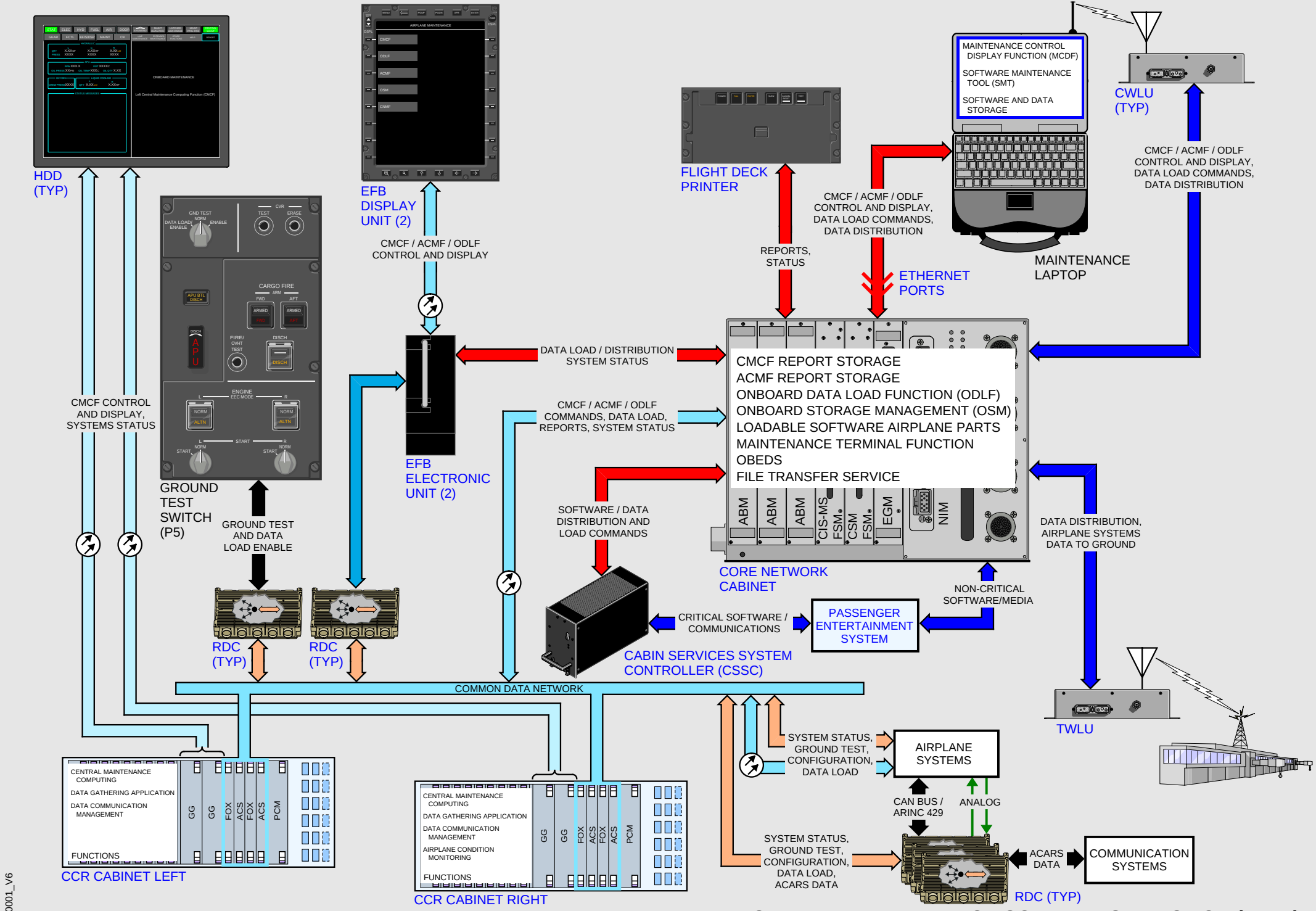
787_0093_0001_V10

CABIN SERVICES SYSTEM (44-11)
PASSENGER ADDRESS SYSTEM (44-12)
PASSENGER SERVICE SYSTEM (44-13)
CABIN INTERPHONE SYSTEM (44-14)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



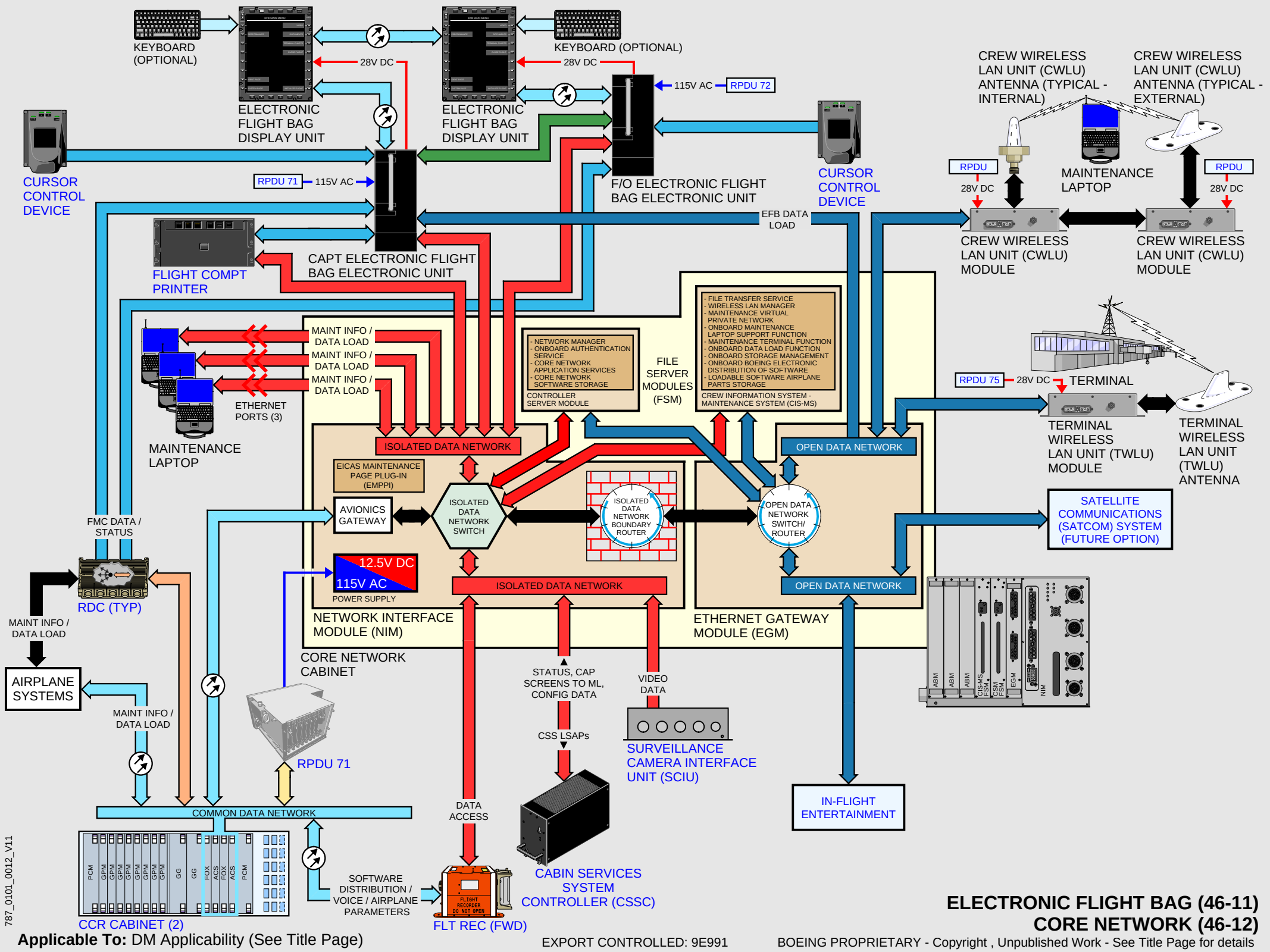
CENTRAL MAINTENANCE COMPUTING FUNCTION (45-11)
AIRPLANE CONDITION MONITORING FUNCTION (45-12)
ONBOARD DATA LOAD FUNCTION (45-13)

787_0096_0001_V6

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

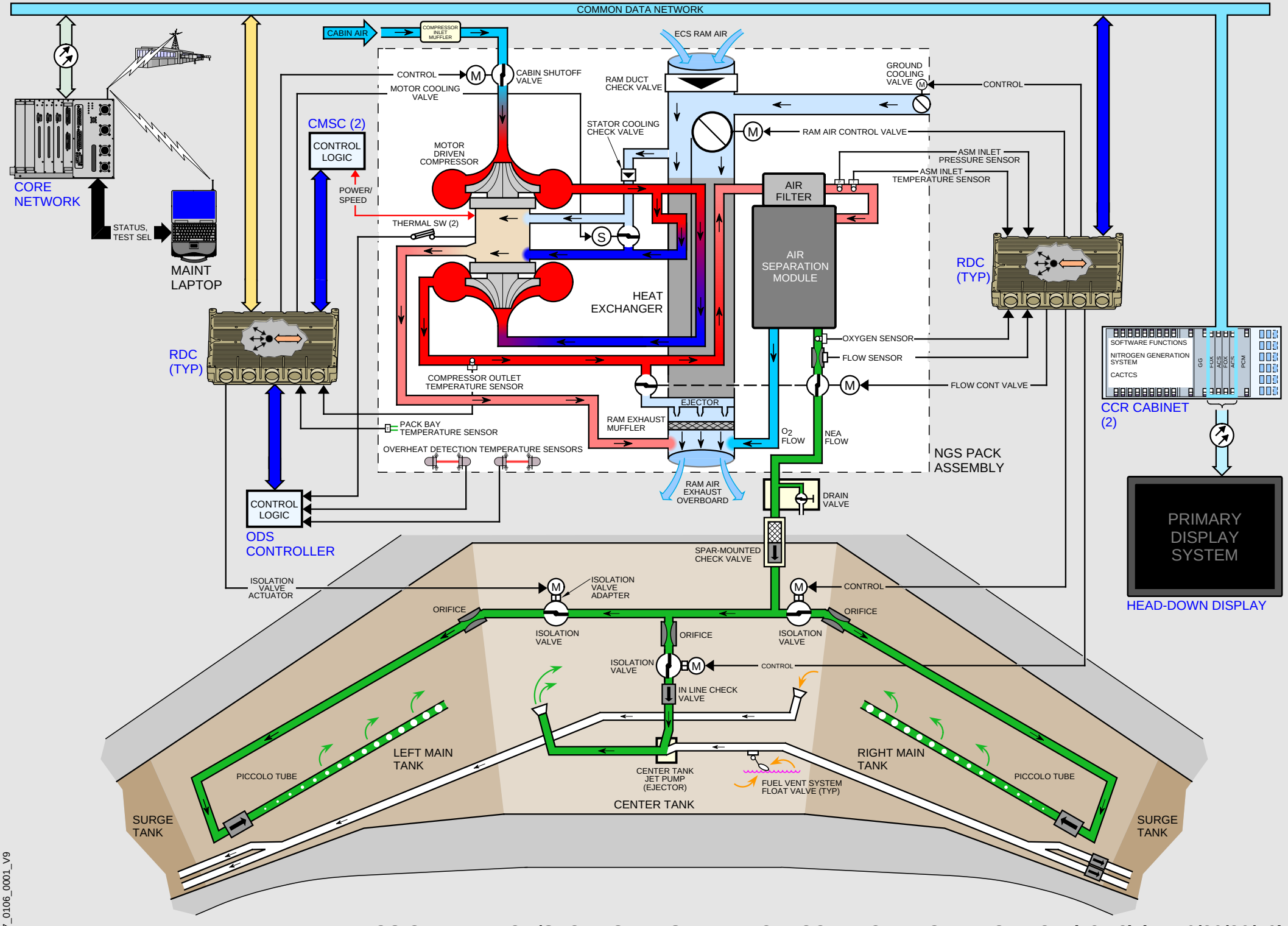


ELECTRONIC FLIGHT BAG (46-11)
CORE NETWORK (46-12)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



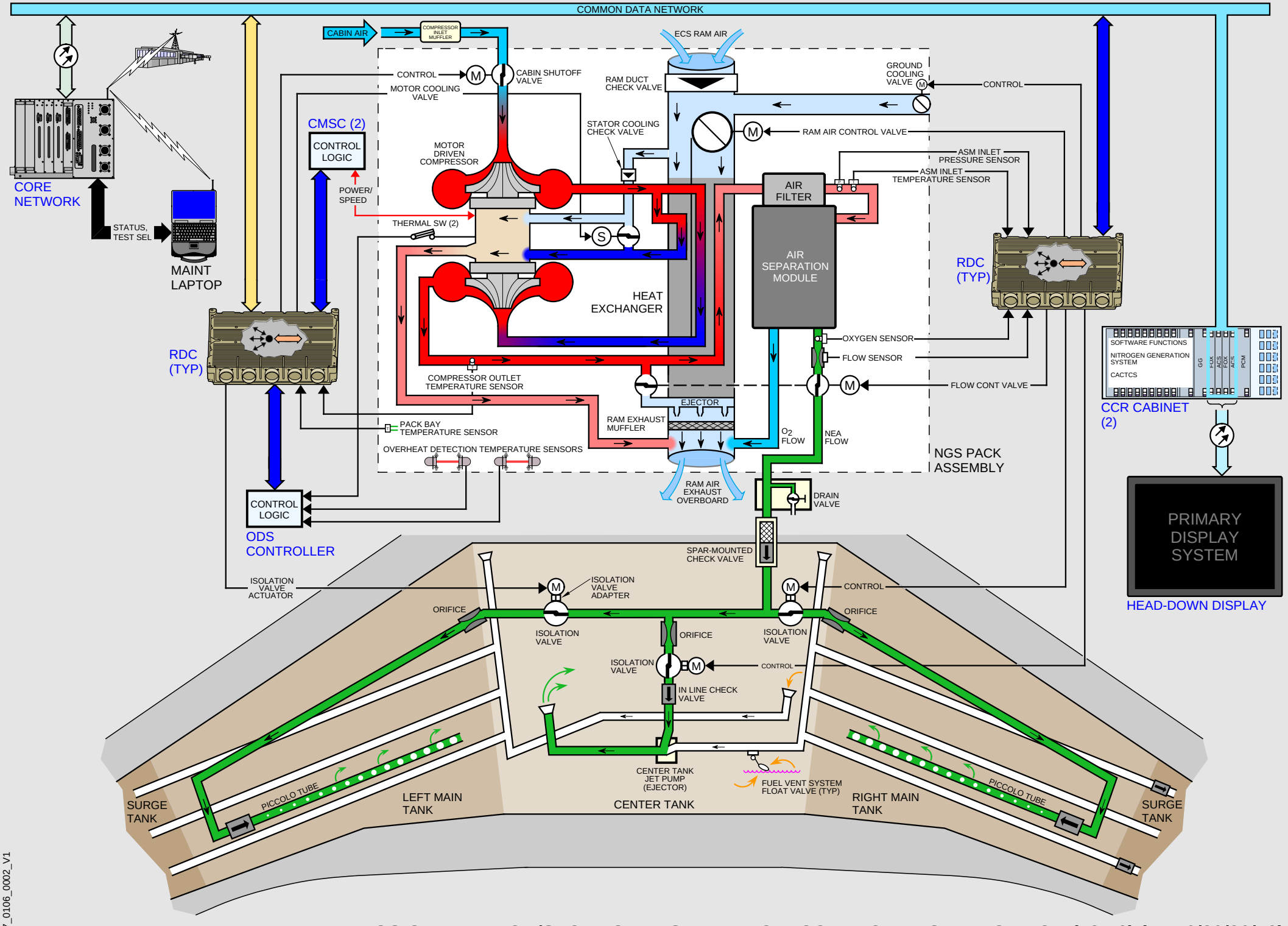
NGS GENERATION/STORAGE, DISTRIBUTION, CONTROLLING, INDICATION (787-8) (47-10/20/30/40)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

787_0106_0001_V9



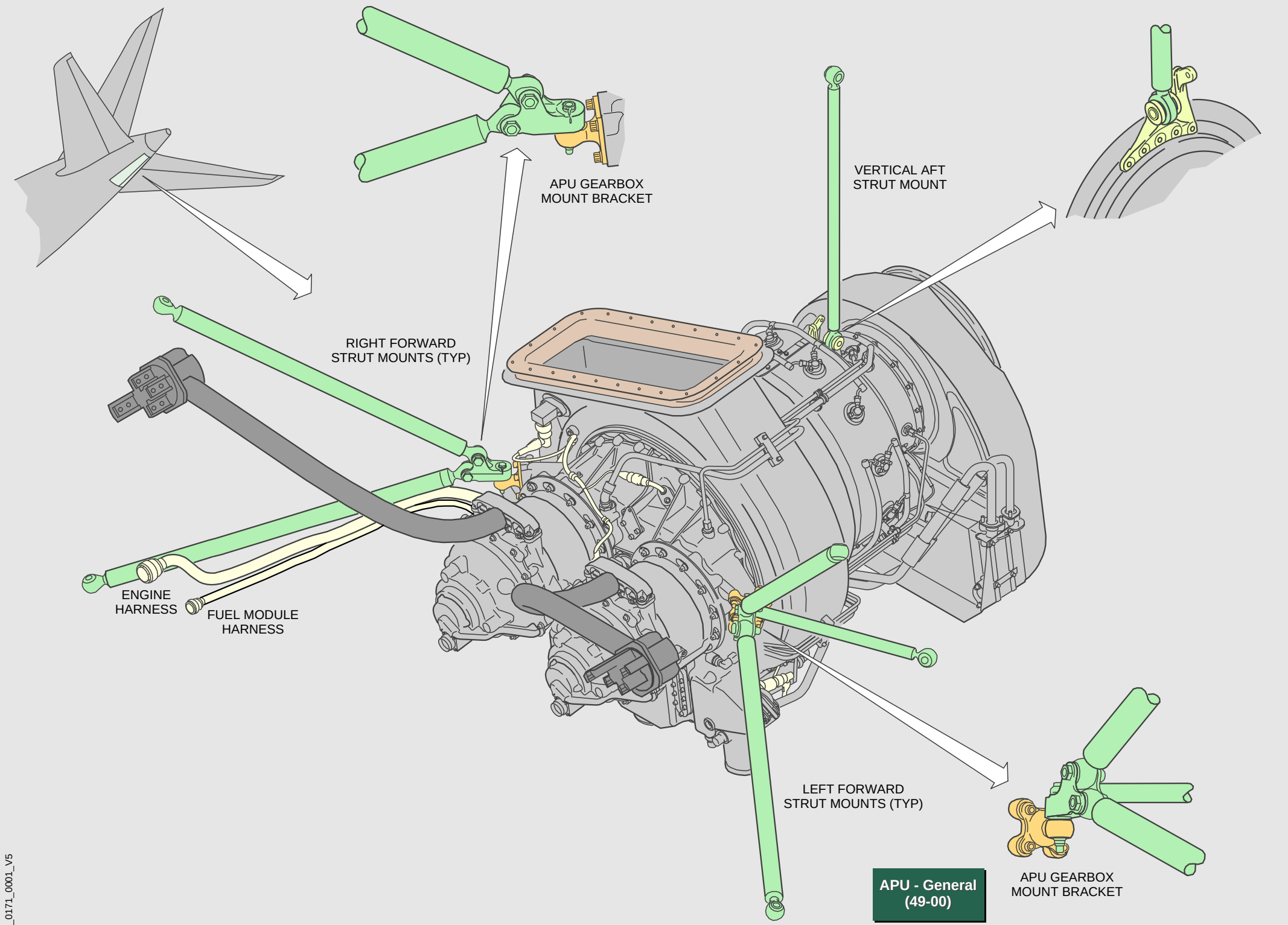
NGS GENERATION/STORAGE, DISTRIBUTION, CONTROLLING, INDICATION (787-9) (47-10/20/30/40)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

787_0106_0002_V1



APU - General (49-00)

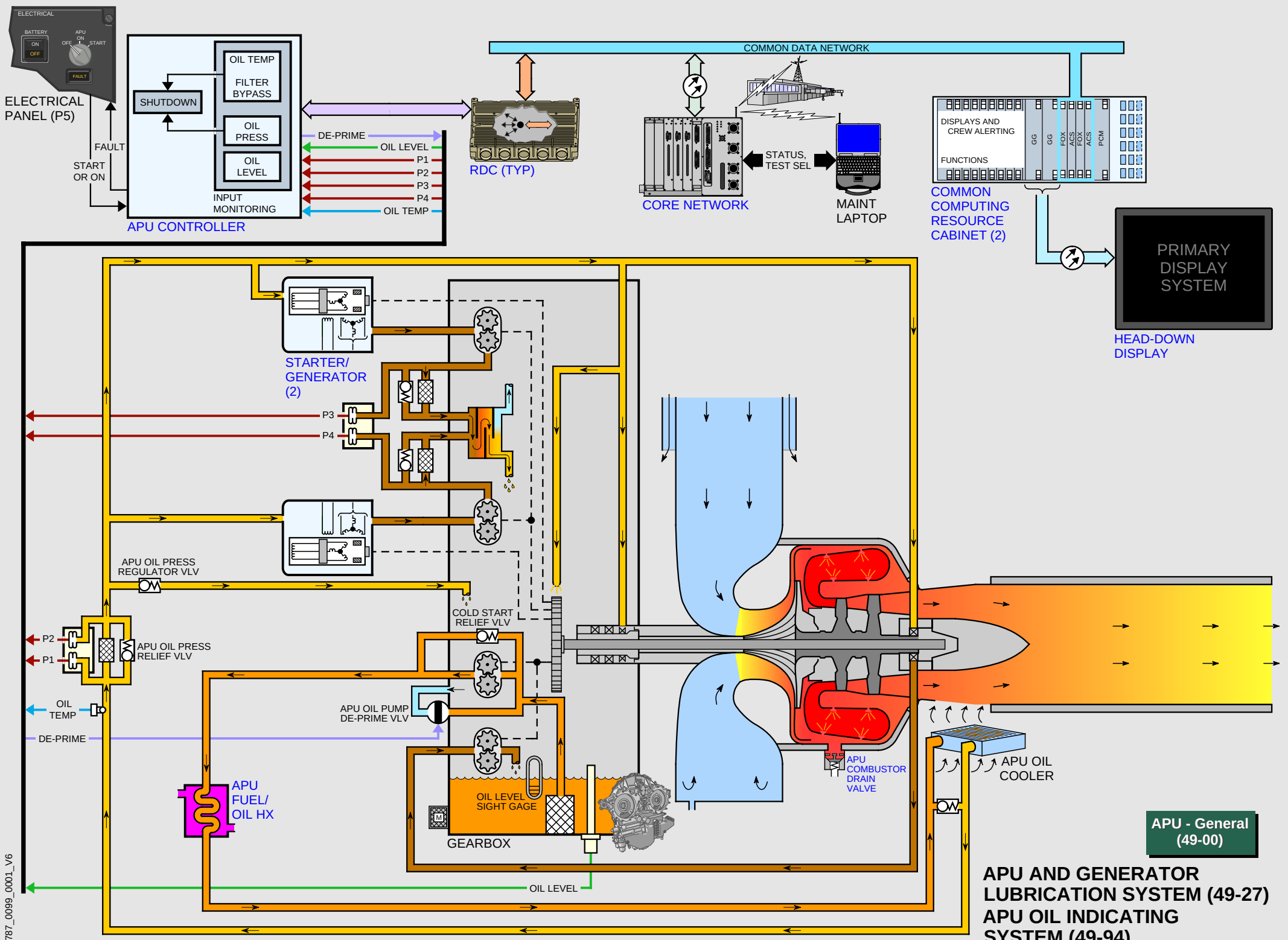
APU POWER PLANT (49-10)

787_0171_0001_V5

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



APU - General (49-00)

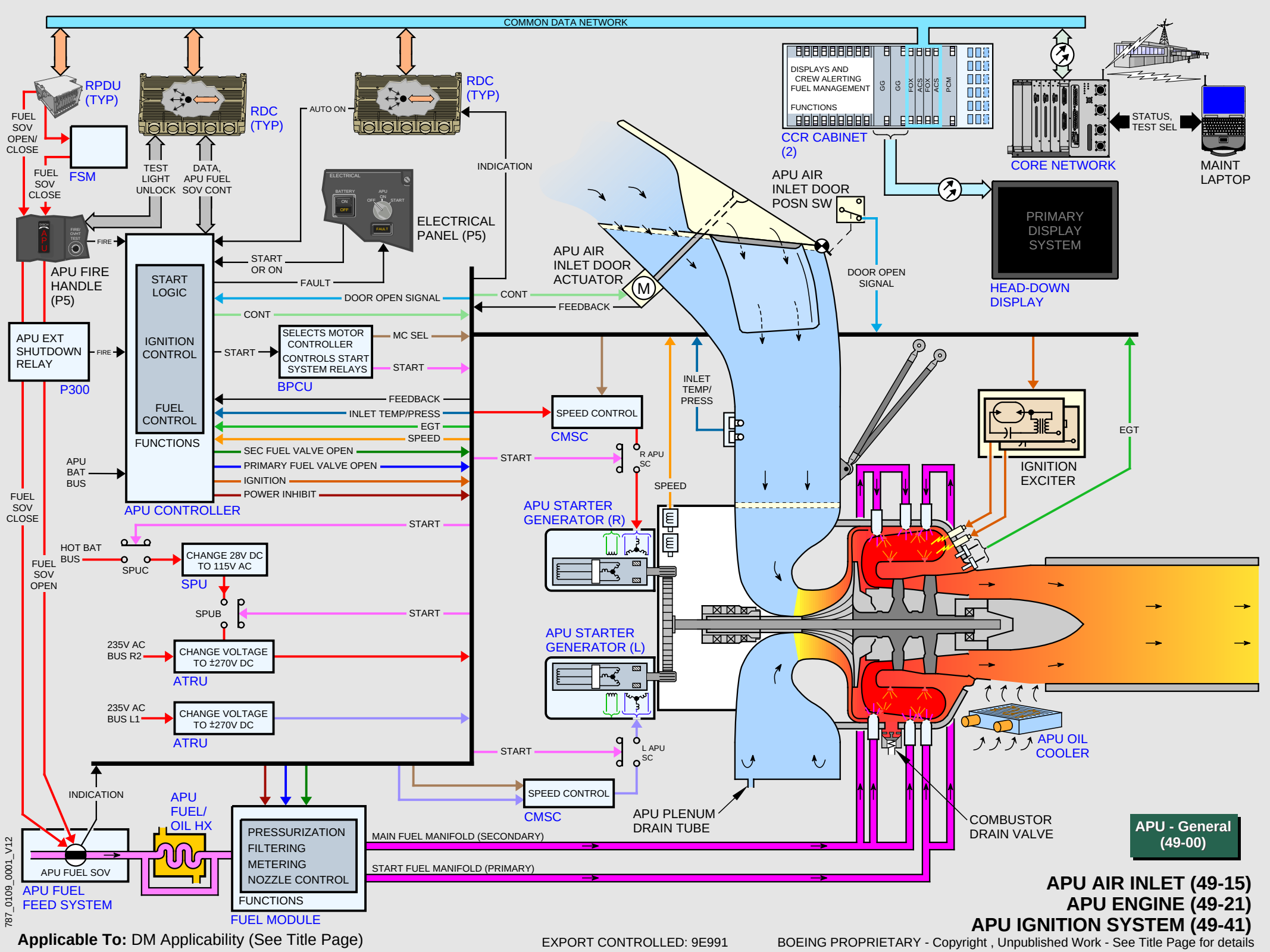
APU AND GENERATOR LUBRICATION SYSTEM (49-27)
APU OIL INDICATING SYSTEM (49-94)

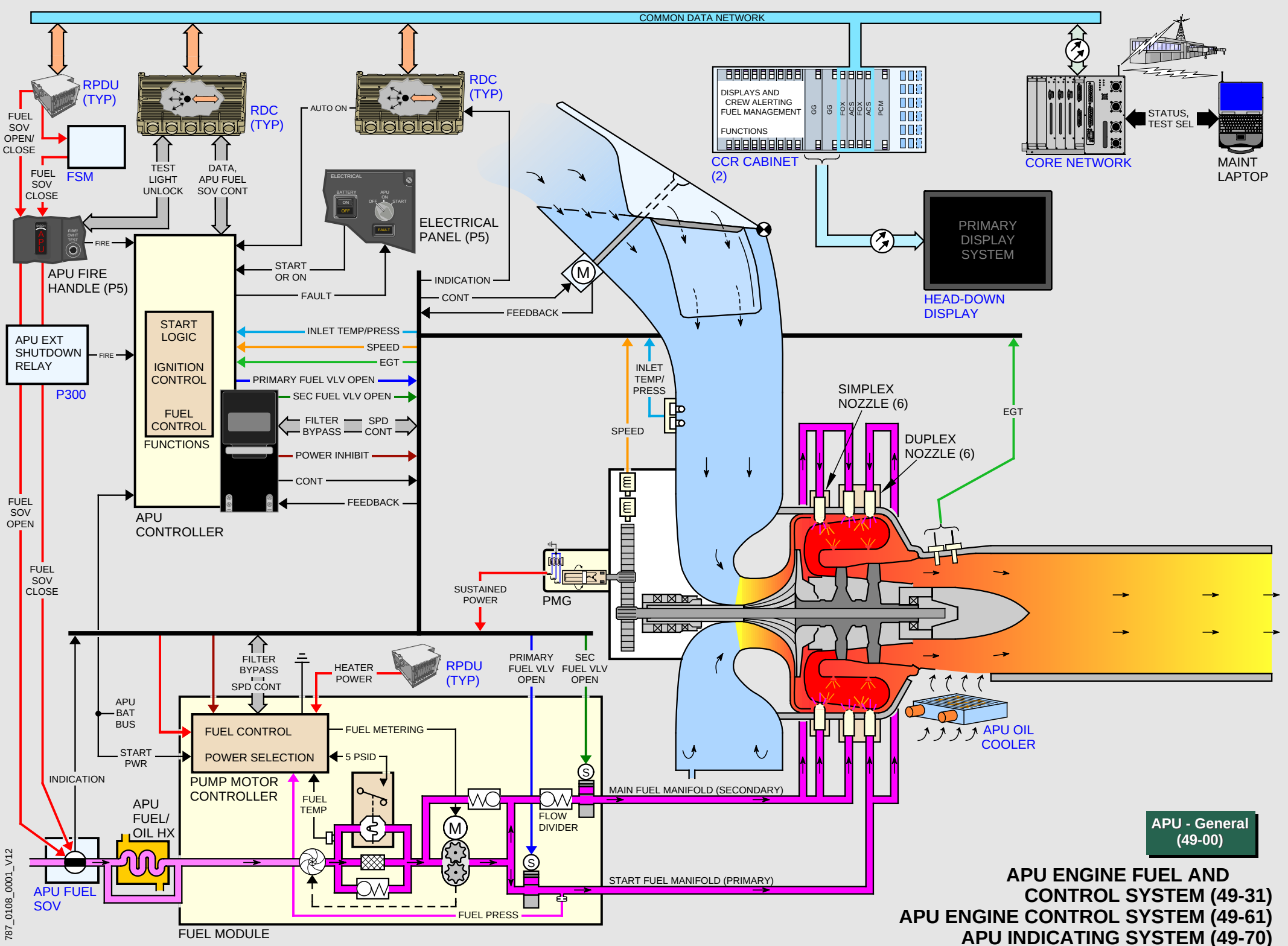
787_0099_0001_V6

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details


COMMON DATA NETWORK
RPDU (TYP)
RDC (TYP)
RDC (TYP)
AUTO ON
INDICATION
FUEL SOV OPEN/ CLOSE
FUEL SOV CLOSE
FSM
TEST LIGHT UNLOCK
DATA, APU FUEL SOV CONT
ELECTRICAL PANEL (P5)
DISPLAYS AND CREW ALERTING FUEL MANAGEMENT FUNCTIONS
GG
GG
FOX
ACS
FOX
ACS
PCM
CCR CABINET (2)
CORE NETWORK
STATUS, TEST SEL
MAINT LAPTOP
APU AIR INLET DOOR POSN SW
PRIMARY DISPLAY SYSTEM
HEAD-DOWN DISPLAY
APU AIR INLET DOOR ACTUATOR
DOOR OPEN SIGNAL
APU FIRE HANDLE (P5)
FIRE
START LOGIC
IGNITION CONTROL
FUEL CONTROL
FUNCTIONS
START OR ON
FAULT
DOOR OPEN SIGNAL
CONT
FEEDBACK
APU EXT SHUTDOWN RELAY
P300
SELECTS MOTOR CONTROLLER
CONTROLS START SYSTEM RELAYS
BPCU
MC SEL
START
FEEDBACK
INLET TEMP/PRESS
EGT
SPEED
SEC FUEL VALVE OPEN
PRIMARY FUEL VALVE OPEN
IGNITION
POWER INHIBIT
APU BAT BUS
APU CONTROLLER
SPEED CONTROL
CMSC
R APU SC
INLET TEMP/ PRESS
EGT
IGNITION EXCITER
SPEED
APU STARTER GENERATOR (R)
APU STARTER GENERATOR (L)
HOT BAT BUS
SPUC
CHANGE 28V DC TO 115V AC
SPU
SPUB
235V AC BUS R2
CHANGE VOLTAGE TO ±270V DC
ATRU
235V AC BUS L1
CHANGE VOLTAGE TO ±270V DC
ATRU
L APU SC
APU OIL COOLER
INDICATION
APU FUEL/ OIL HX
APU FUEL SOV
APU FUEL FEED SYSTEM
PRESSURIZATION
FILTERING
METERING
NOZZLE CONTROL
FUNCTIONS
FUEL MODULE
SPEED CONTROL
CMSC
APU PLENUM DRAIN TUBE
COMBUSTOR DRAIN VALVE
MAIN FUEL MANIFOLD (SECONDARY)
START FUEL MANIFOLD (PRIMARY)
APU - General (49-00)
APU AIR INLET (49-15)
APU ENGINE (49-21)
APU IGNITION SYSTEM (49-41)
787_0109_0001_V12
Applicable To: DM Applicability (See Title Page)
EXPORT CONTROLLED: 9E991
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



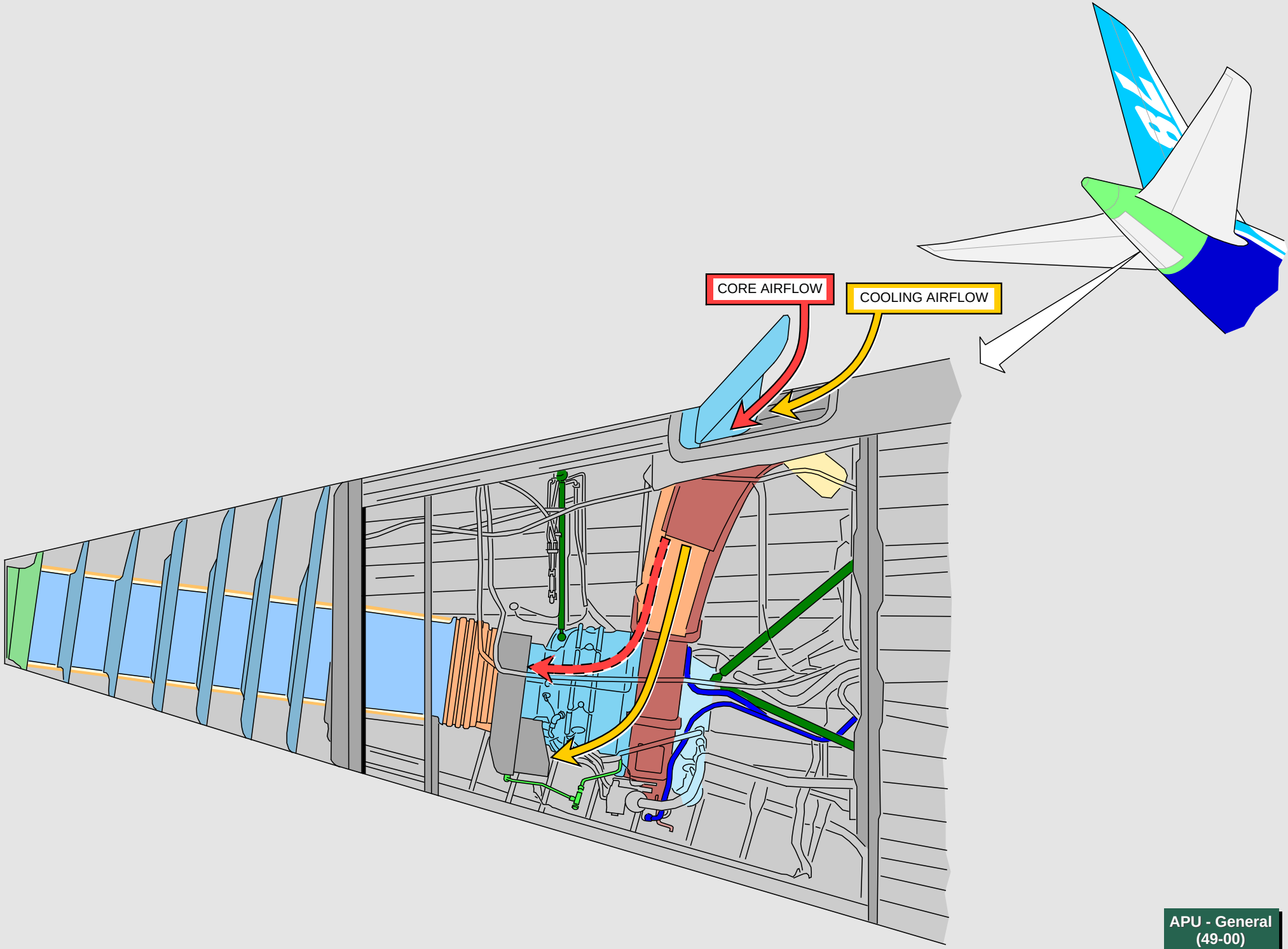
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

APU - General (49-00)

APU ENGINE FUEL AND CONTROL SYSTEM (49-31)
APU ENGINE CONTROL SYSTEM (49-61)
APU INDICATING SYSTEM (49-70)



APU - General (49-00)

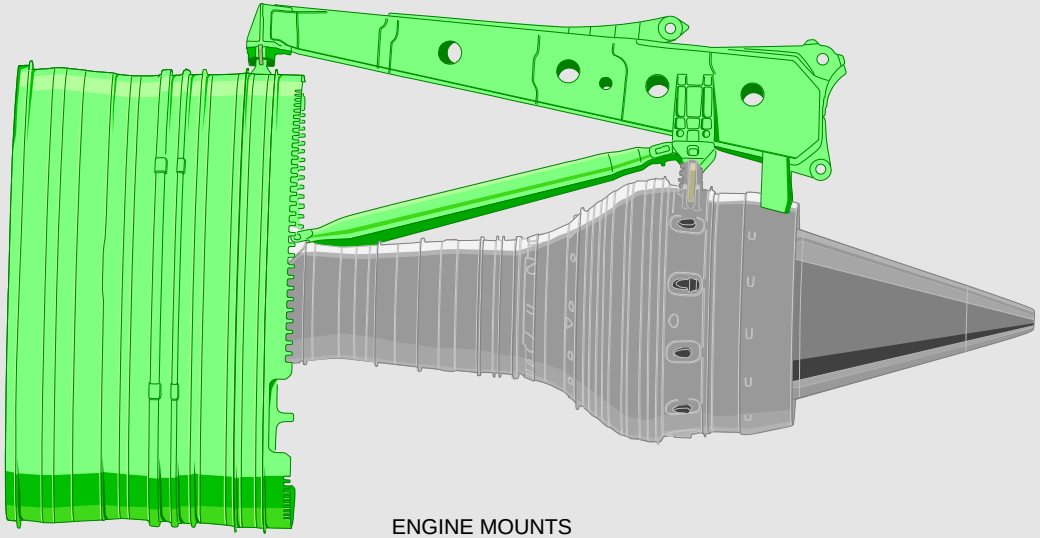
APU EXHAUST SYSTEM (49-81)

787_0110_0001_V5

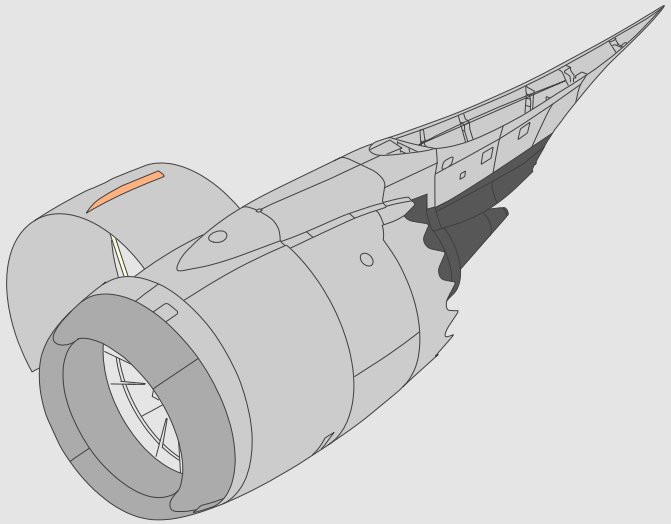
Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

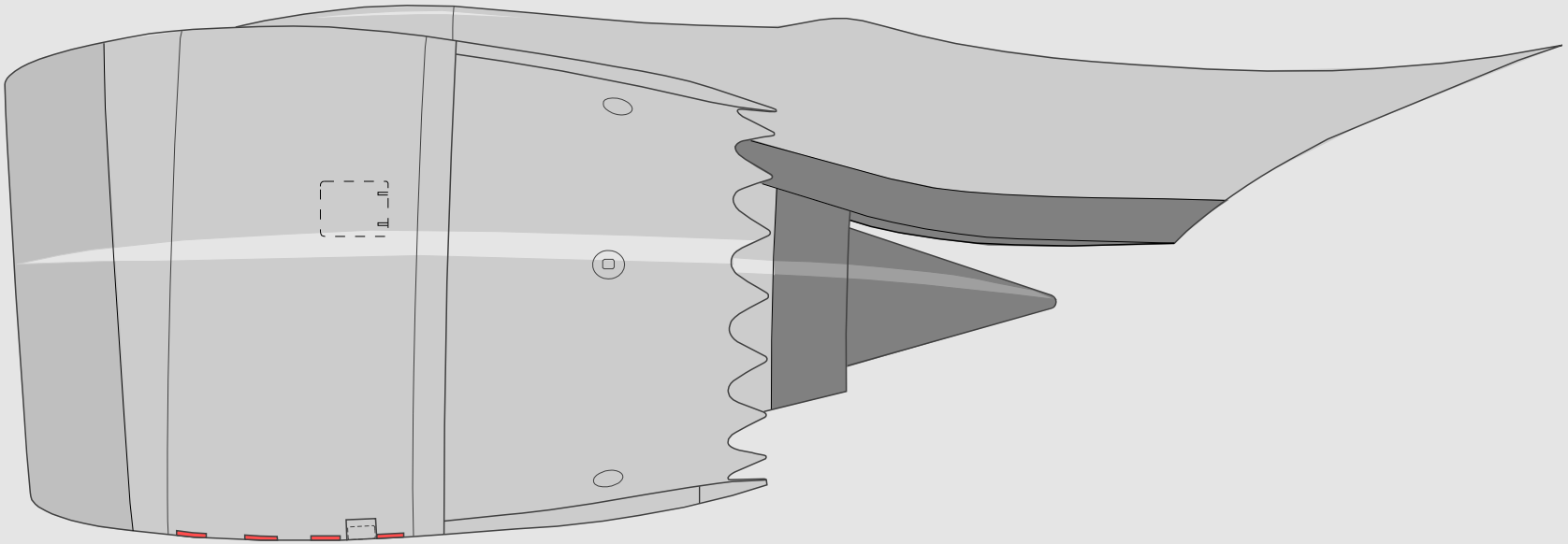
BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



ENGINE MOUNTS



LEFT ENGINE
(RIGHT ENGINE OPPOSITE)



COWLINGS

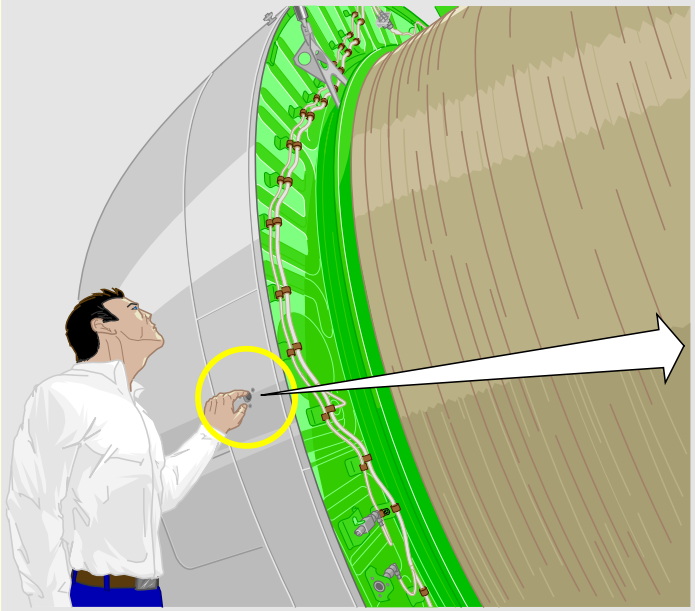
787_2102_0001_V2

Applicable To: DM Applicability (See Title Page)

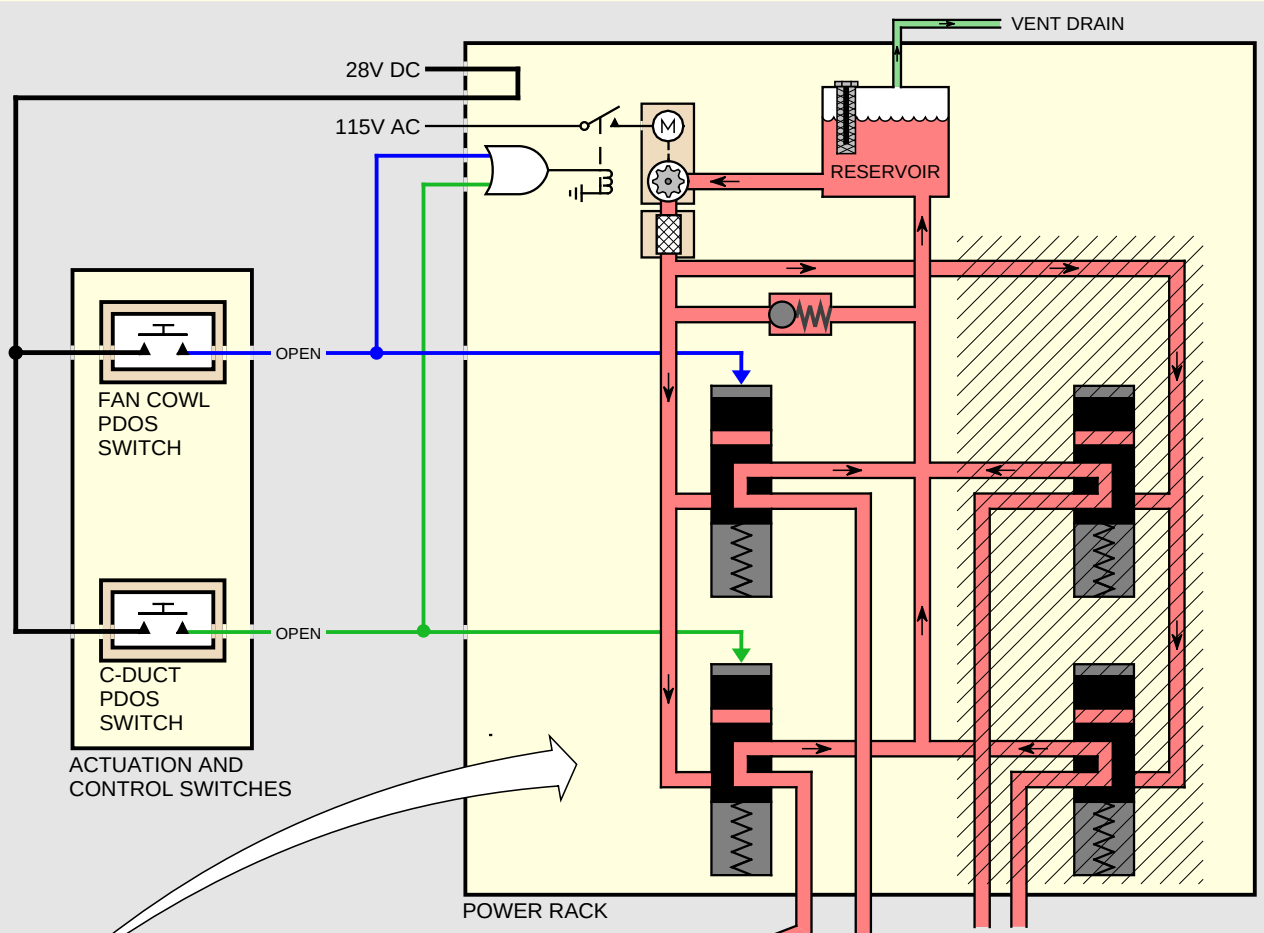
EXPORT CONTROLLED: 9E991

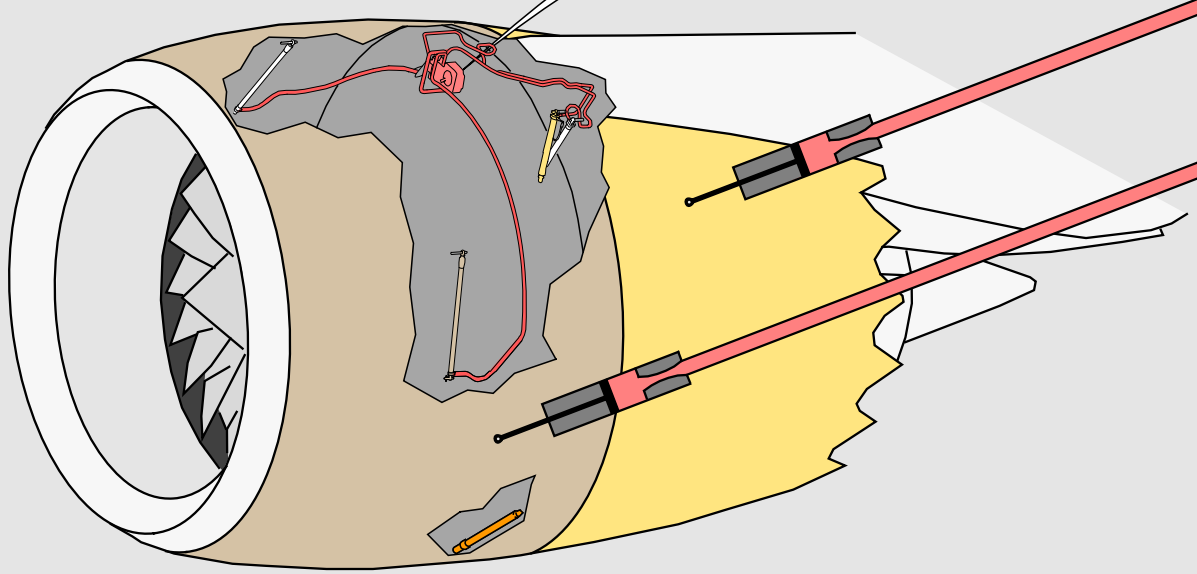
RR ENGINE COWLING/MOUNTS (71-10/21)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

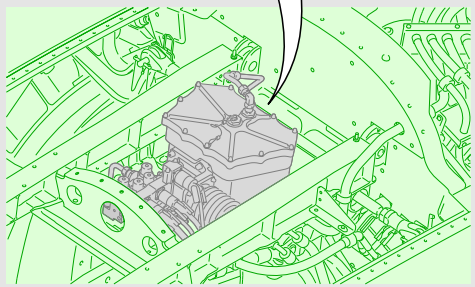


FWD





LEFT ENGINE SHOWN



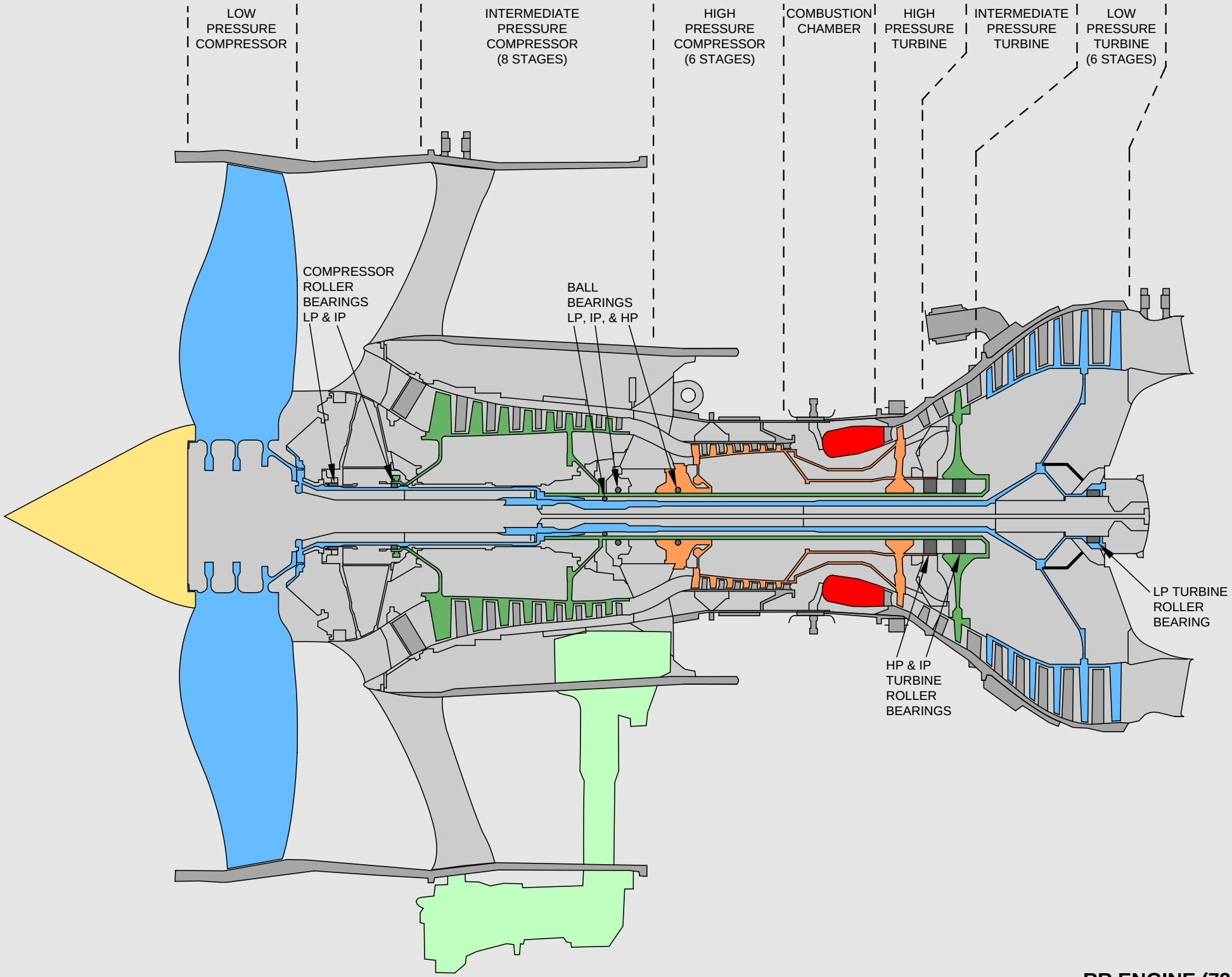
787_2103_0001_V2

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

POWERED DOOR OPENING SYSTEM (PDOS) (71-12)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



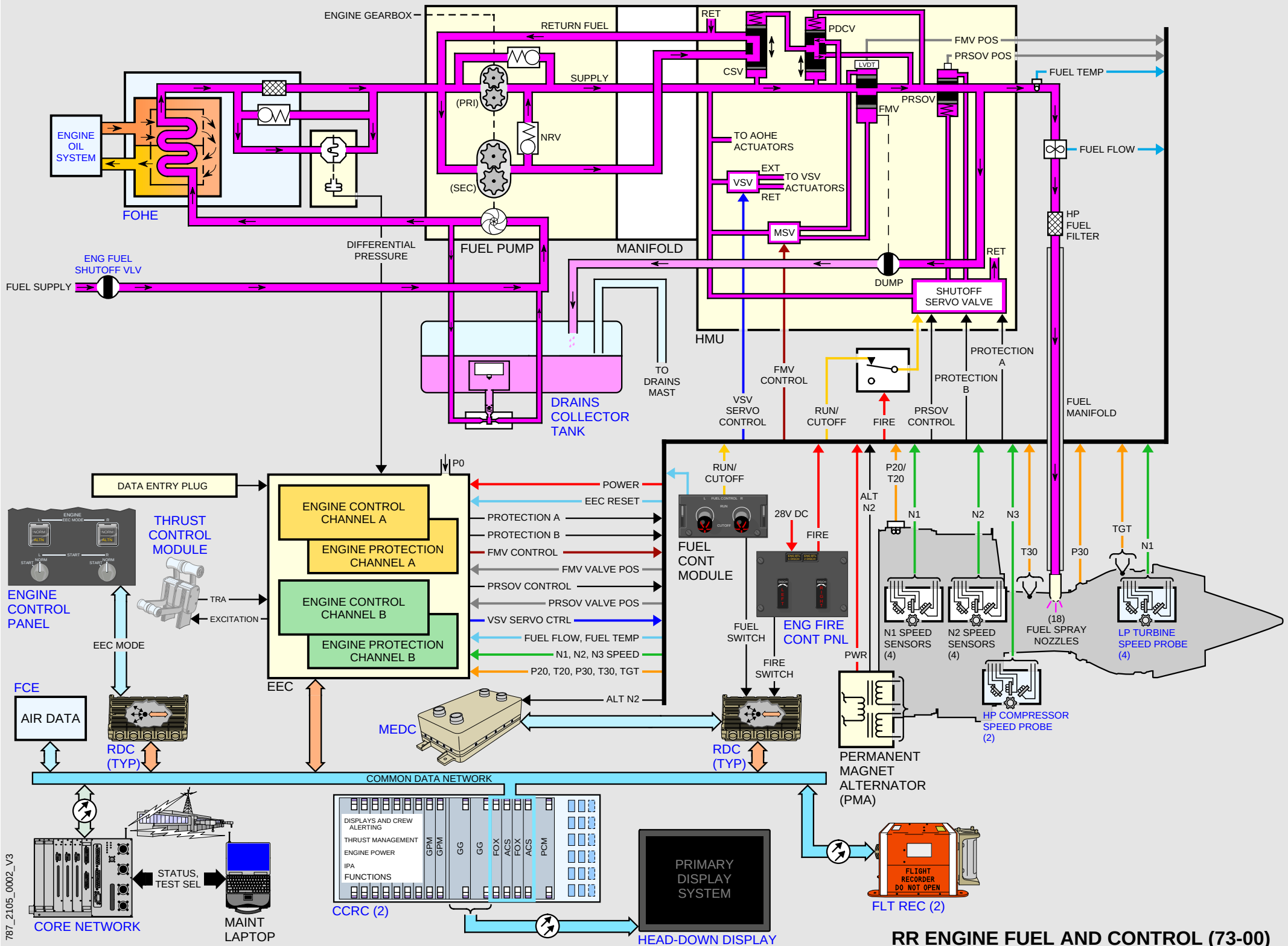
787_2104_0001_V2

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details

RR ENGINE (72-00)

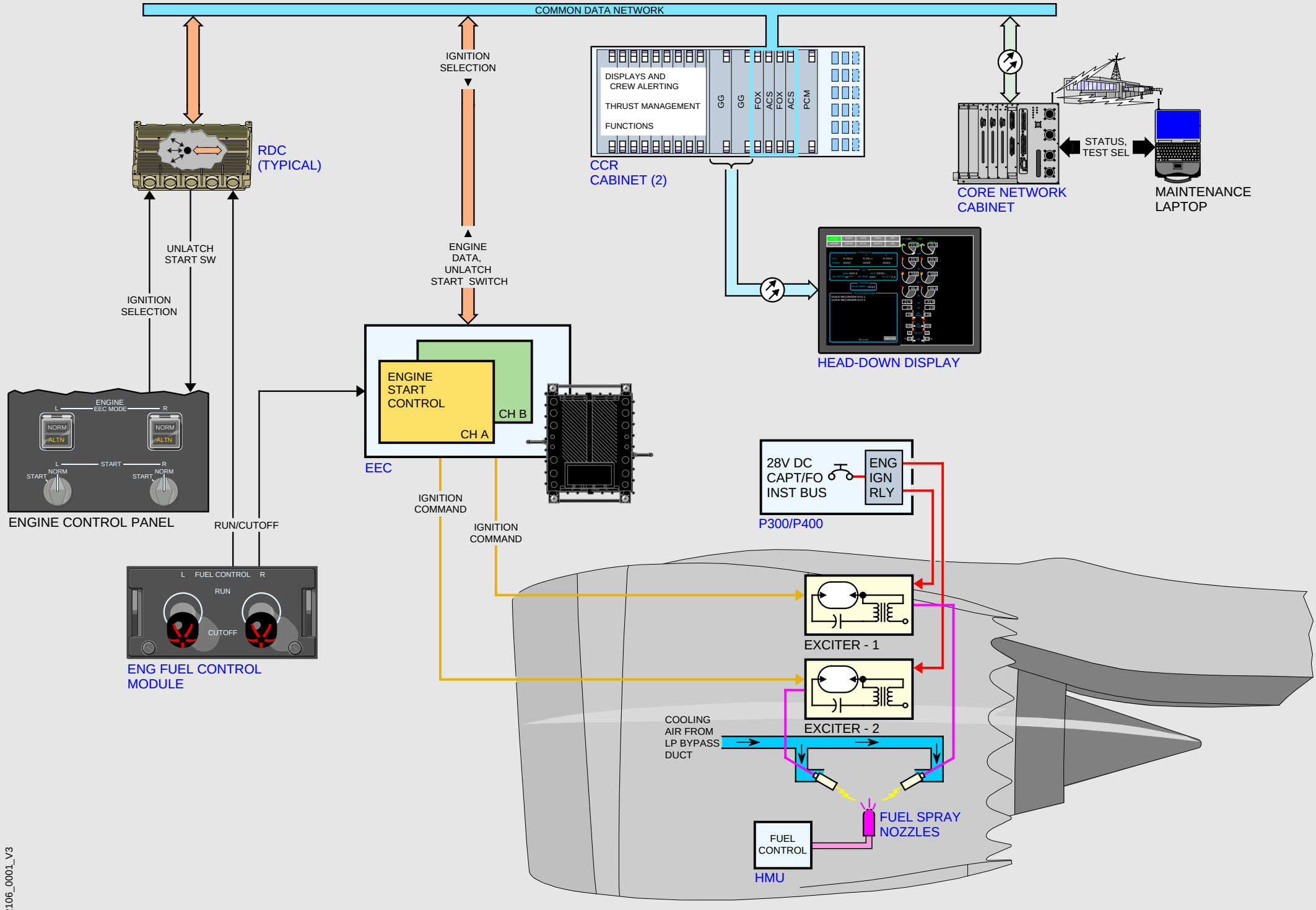


Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

RR ENGINE FUEL AND CONTROL (73-00)

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



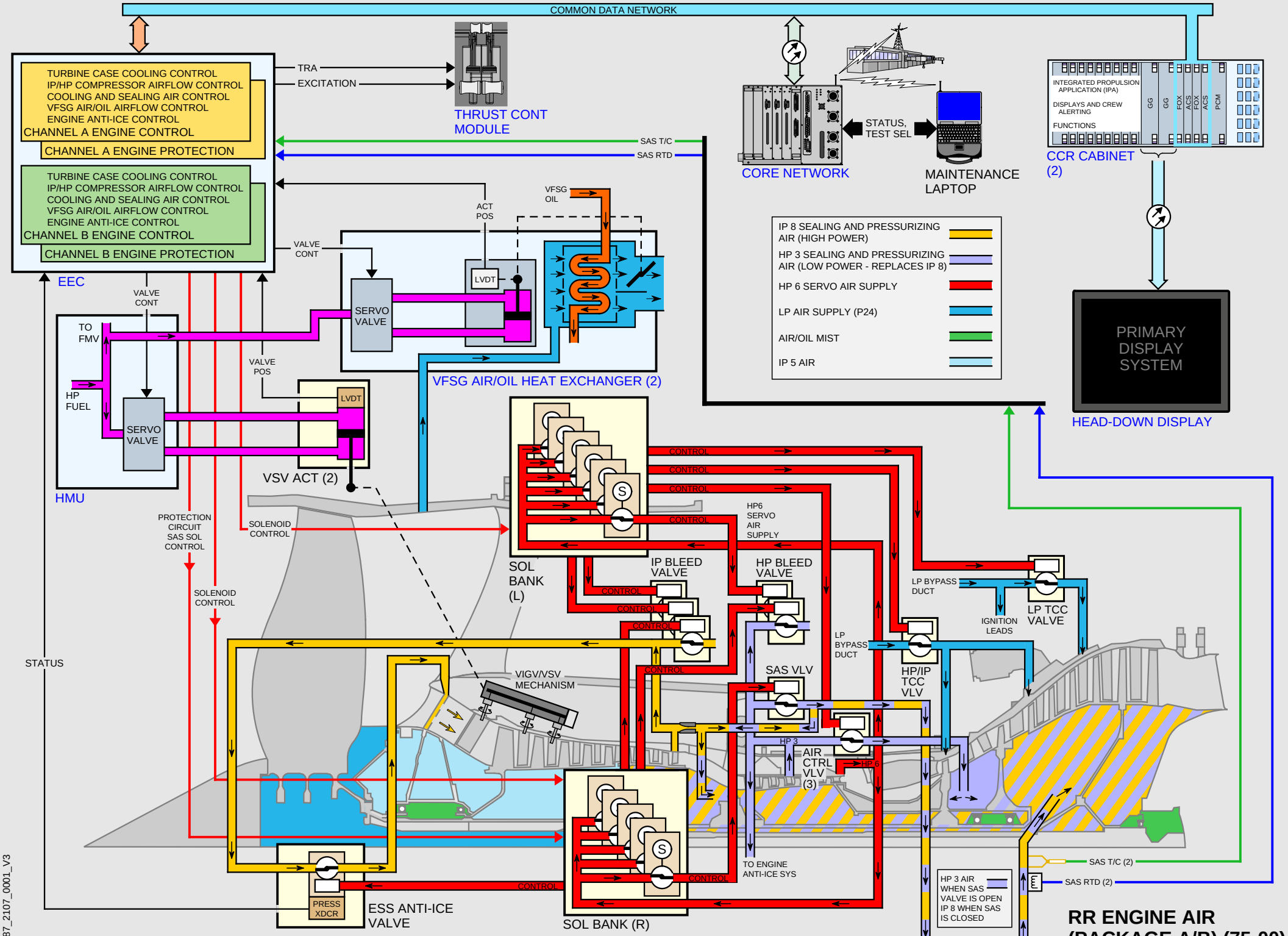
787_2106_0001_V3

RR ENGINE IGNITION (74-00)

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



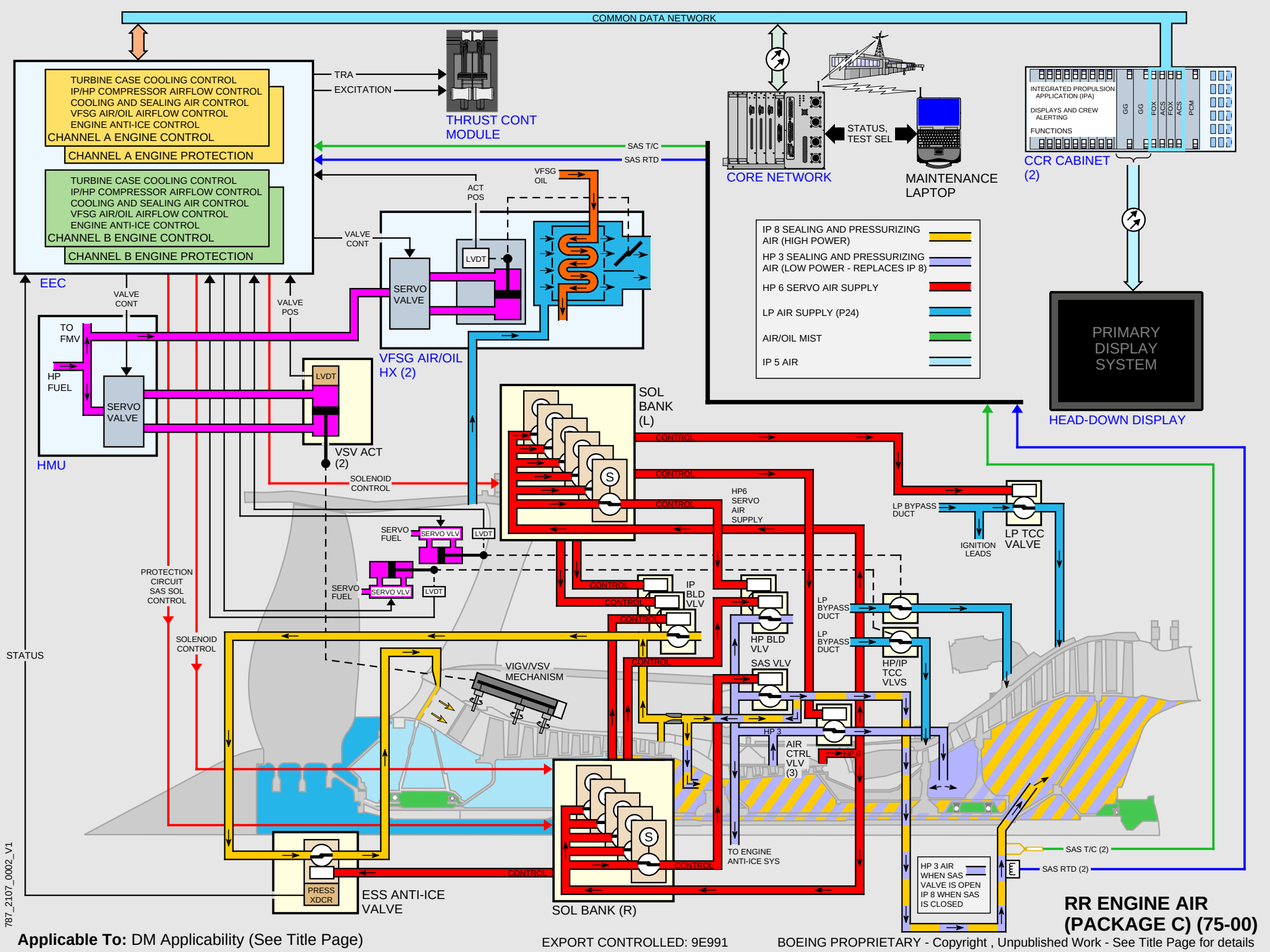
RR ENGINE AIR (PACKAGE A/B) (75-00)

787_2107_0001_V3

Applicable To: DM Applicability (See Title Page)

EXPORT CONTROLLED: 9E991

BOEING PROPRIETARY - Copyright , Unpublished Work - See Title Page for details



RR ENGINE AIR (PACKAGE C) (75-00)

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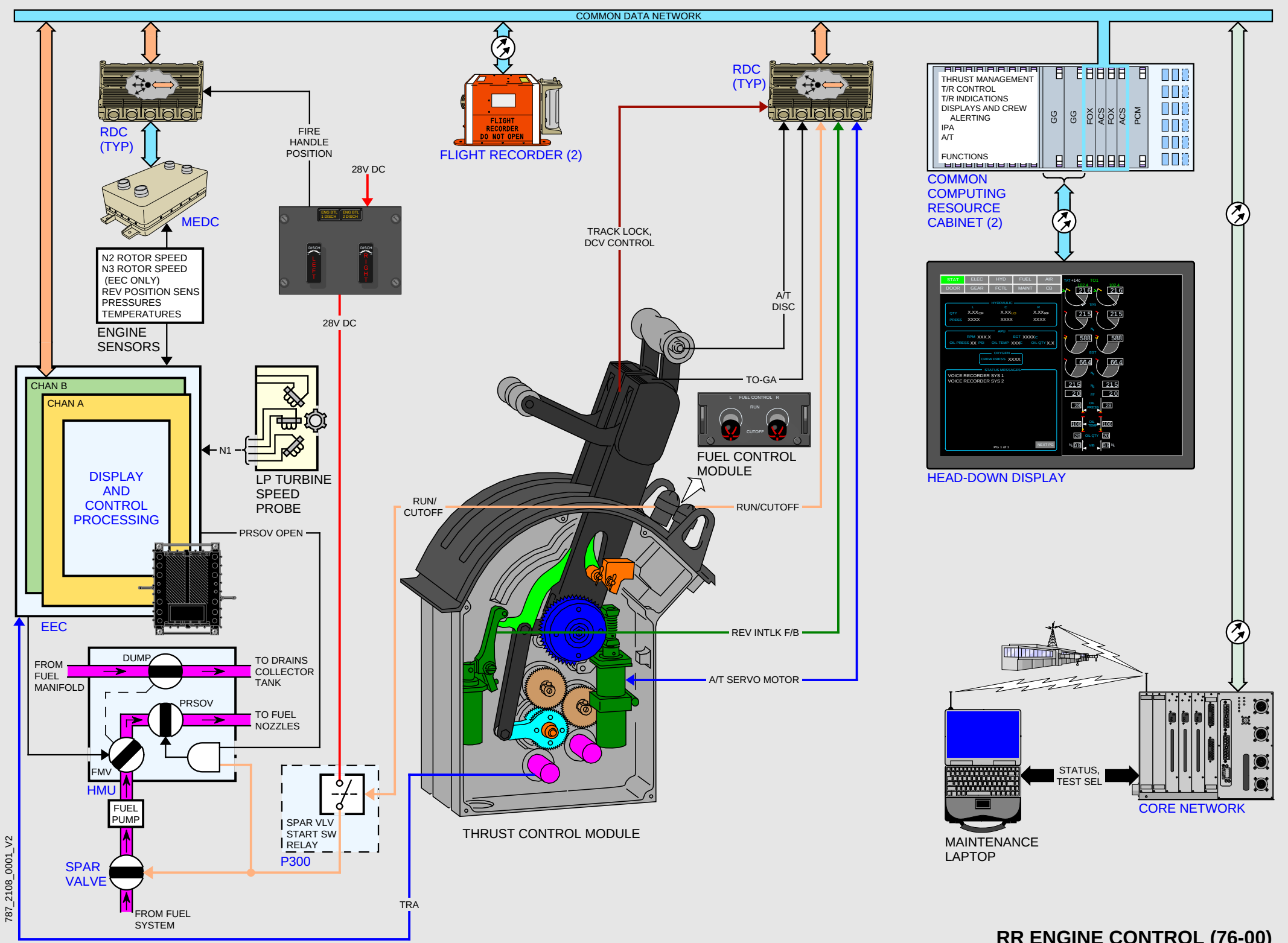

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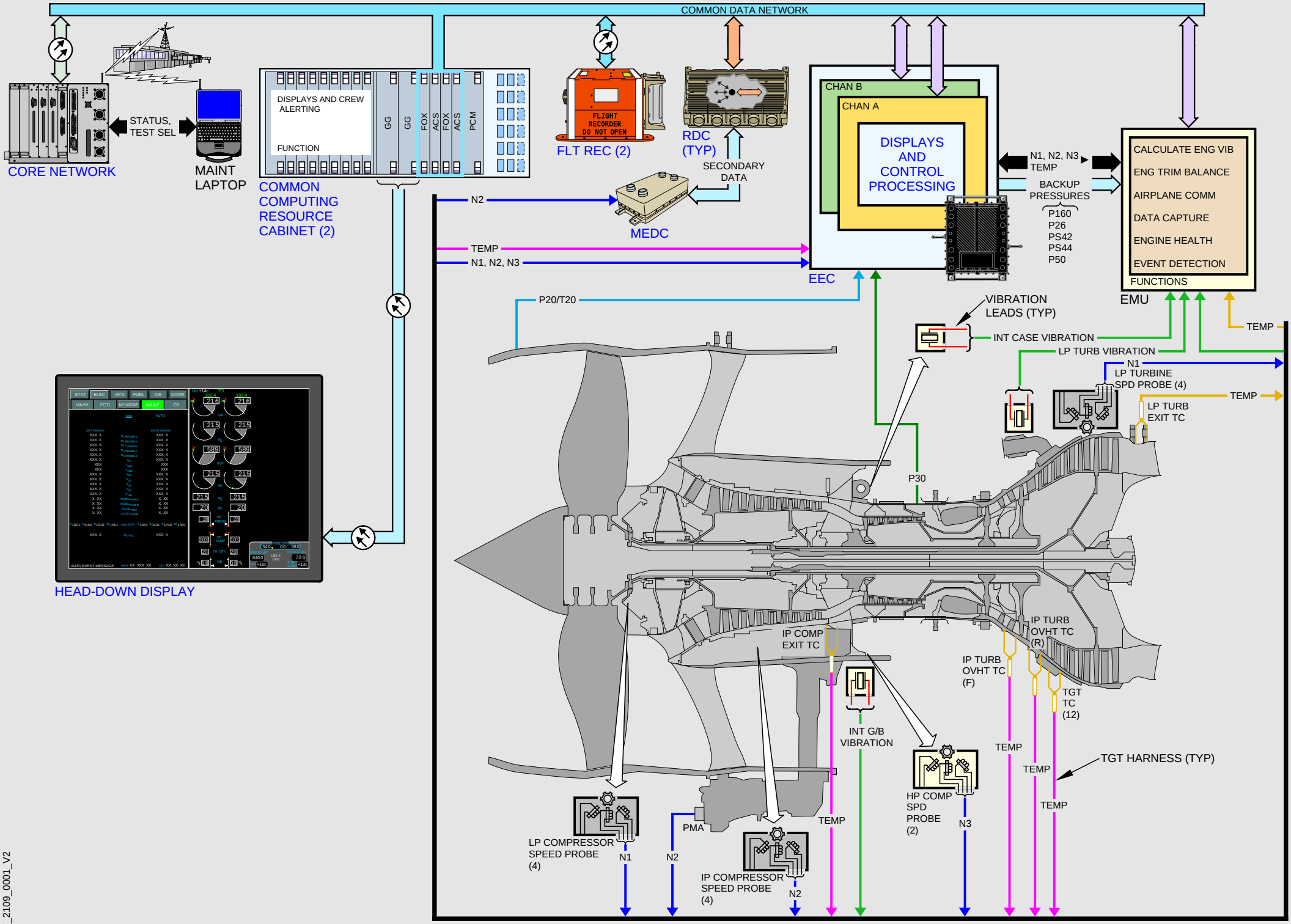
RR ENGINE CONTROL (76-00)



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RR ENGINE INDICATING (77-00)

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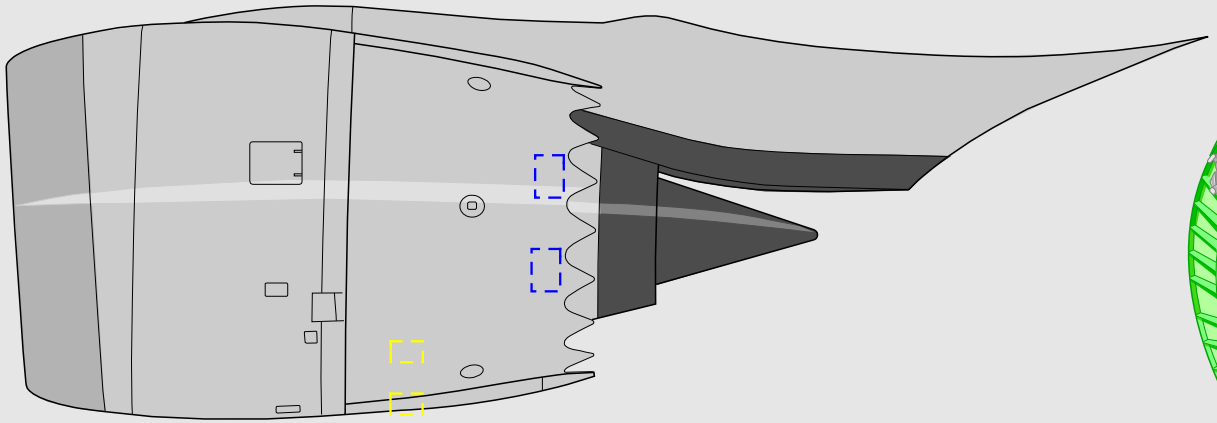

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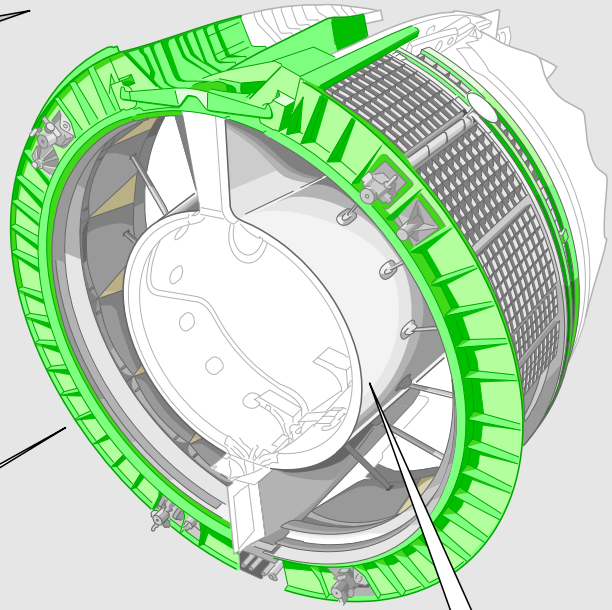

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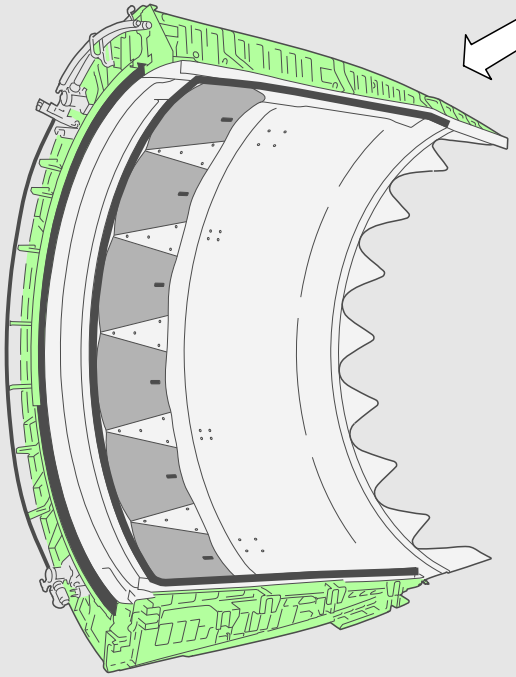

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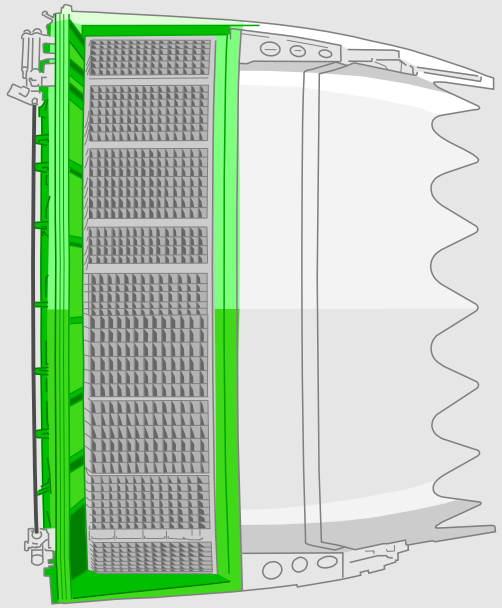

T/R TRANSLATING SLEEVE

787_2111_0001_V2

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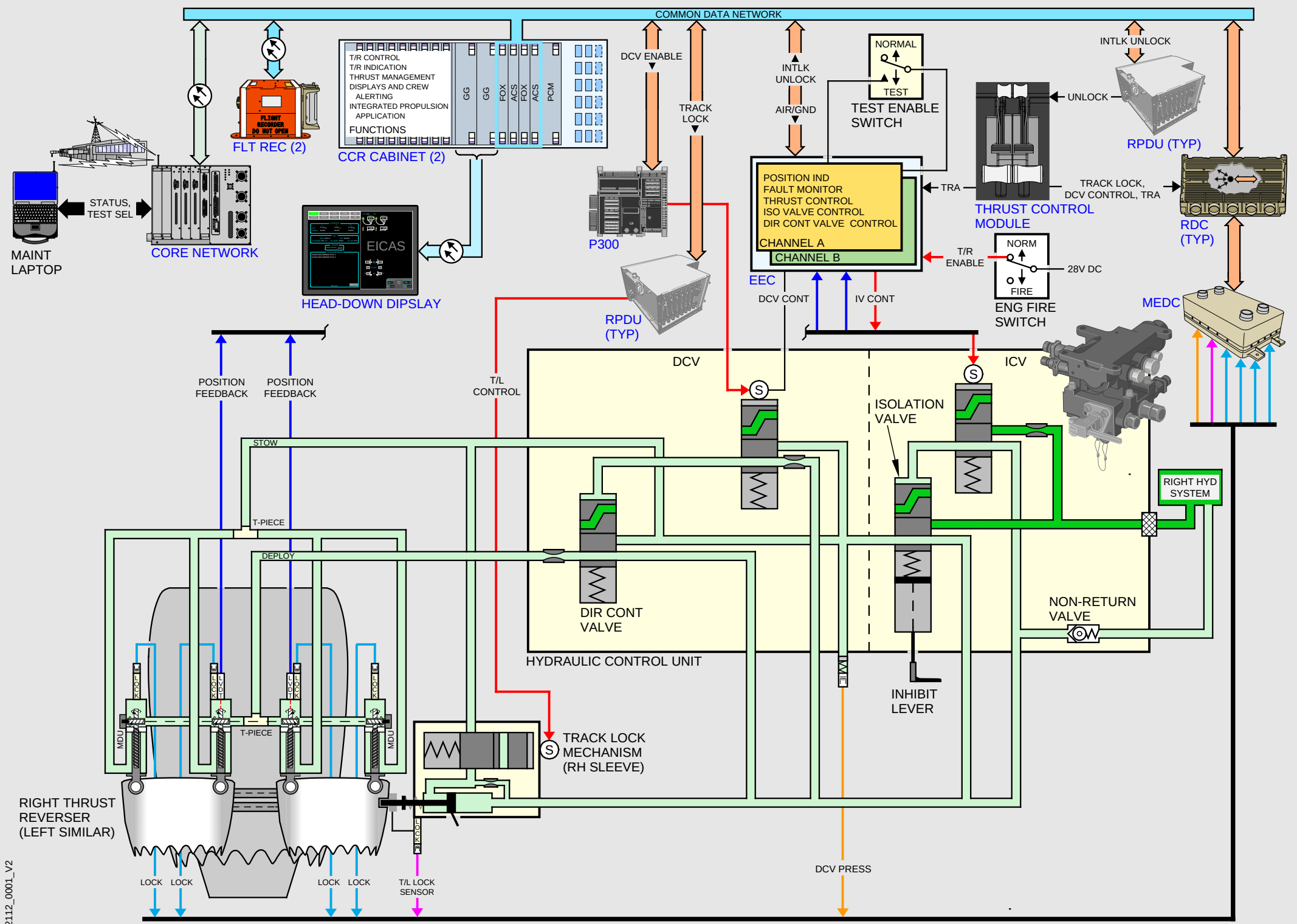
RR ENGINE EXHAUST (78-11/31)



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RR ENGINE THRUST REVERSER CONTROL AND INDICATION (78-34)

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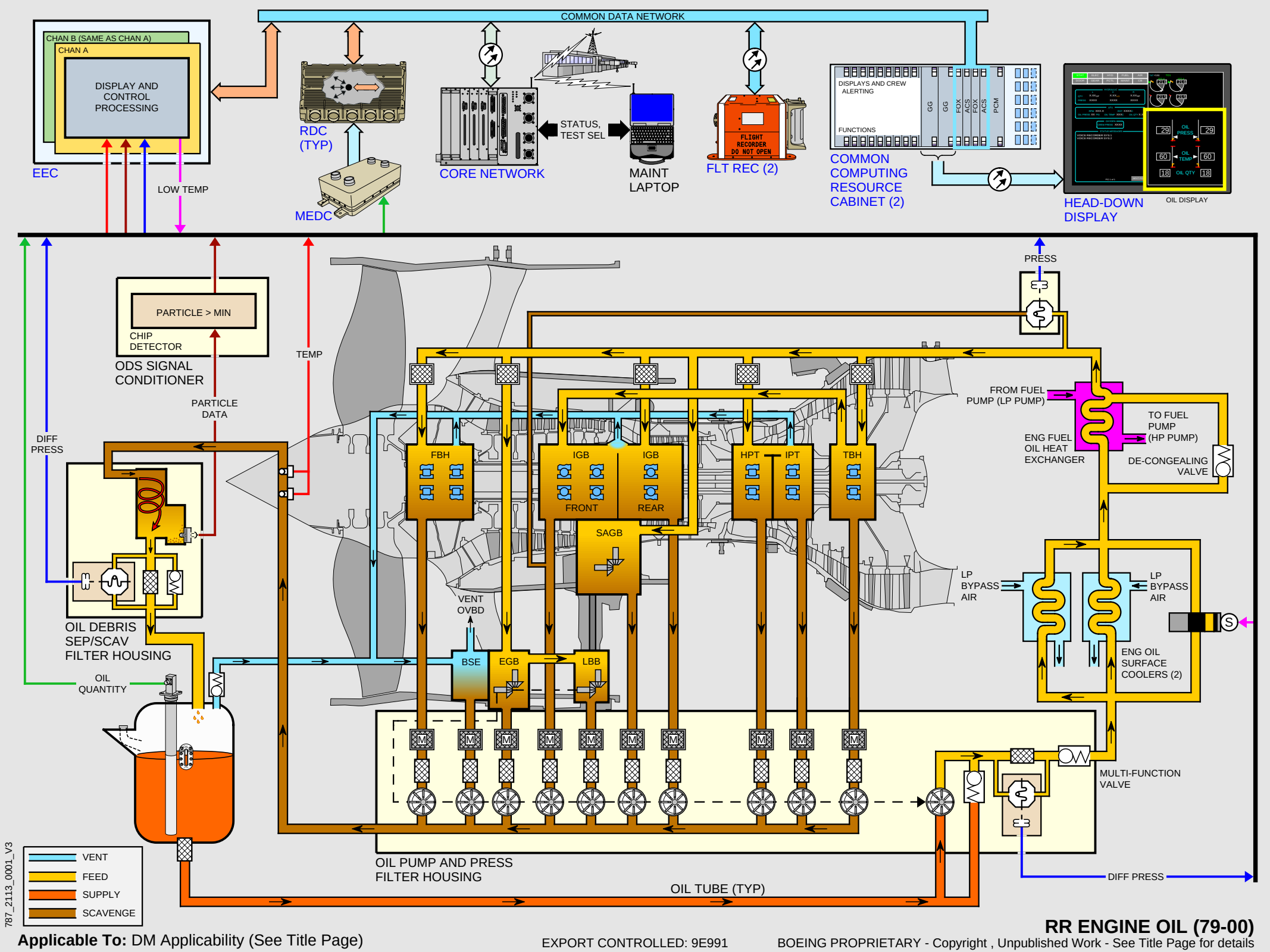

RR ENGINE OIL (79-00)

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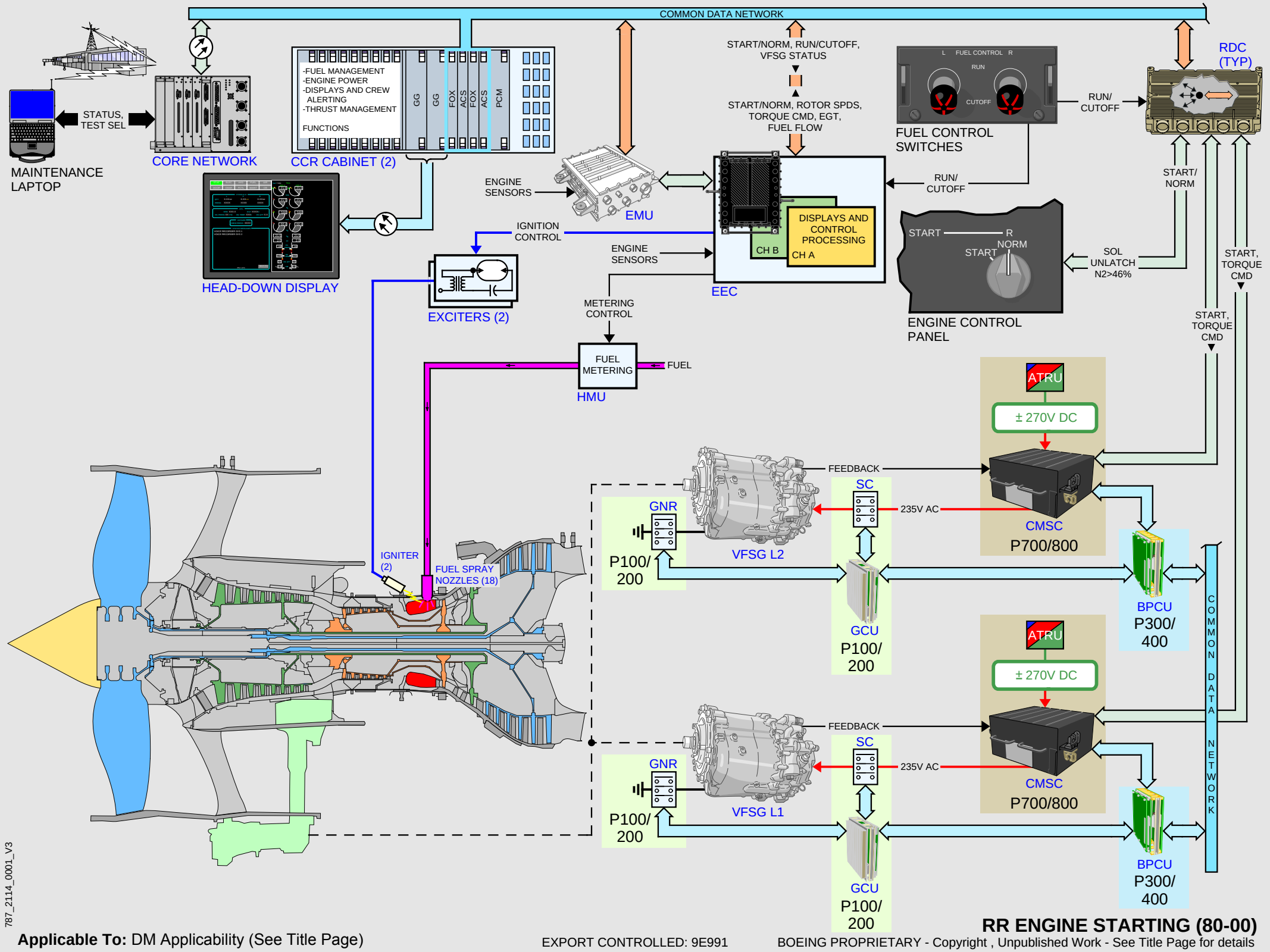

RR ENGINE STARTING (80-00)

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